The Sixteenth Annual Ted Winnowski '63 Student Conference in Business

TWSCB 2022

Vol. 15 (1)

Editors:
Kendra Godson ('23)
Avery Knous ('23)

Cheryl Buff, Ph.D.
Professor of Marketing

Ashley Provencher, Ph.D.
Associate Professor of Economics

Ted Winnowski '63

Ted Winnowski, a financial and corporate consultant, is also a strategic member of Columbia Business Advisors, a private consulting firm in the Northwest, plus Veber partners an investment banking firm. Previously, he served as president and chief executive officer of Centennial Bank and Centennial Bancorp, Portland. He has more than 30 years of financial and banking experience, having begun his career at KeyCorp's flagship bank in Albany, New York. He served as president and CEO of KeyBank of Oregon, KeyBank of Washington, and EVP of KeyCorp's Northwest Region in Seattle. Prior to banking assignments, he served with the IRS in New York City and the U.S. Army in France.

He graduated with a bachelor's degree in economics from Siena College and did post-graduate work in business and management at Rensselaer Polytechnic Institute and at the National Graduate Trust School of Northwestern University. He recently served as a board member for Regence BlueCross and BlueShield of Oregon, is the former Honorary Consul of the Republic of Poland in Oregon, and is honorary board chair for the Portland Chamber of Commerce (currently Portland Business Alliance).

His former community activities include the chairmanship of the Oregon Bankers Association, and membership in the Mayor's Business Round Table, the Association for Portland Progress, the World Affairs Council of Oregon, and the United Cerebral Palsy. He currently serves on the Board of Regents, University of Portland and as past chair for six years.

TABLE OF CONTENTS

ANALYTICS

ECONOMICS

ENTREPRENEURSHIP

FINANCE

MANAGEMENT

MARKETING

PREDICTING LIFE EXPECTANCY OF COUNTRIES THROUGH SOCIO-ECONOMIC INDICATORS

Davis Zerr, Siena College
Dr. Necip Doganaksoy, Siena College

ABSTRACT

One of the most hotly contested political subjects in recent decades has been healthcare. For example, many pieces of legislation have been tasked to reform the United States healthcare system, with varying levels of success. Recently, the Biden Administration announced that it will take action to strengthen parts of the Affordable Care Act. While it seems intuitive that an increase in health expenditures would increase the overall quality of care that may not always be the case. In response, I wonder if other factors might help increase the quality of care and life expectancy for a country. This analysis aims to determine the significance of different socioeconomic factors if they can accurately predict a country's life expectancy. Using several different global databases, I compiled 12 distinct independent variables for nearly 70 countries with wide-ranging economic and social backgrounds.

While numerous analytical techniques and models were used to examine the data the most insightful models were generated through different forms of partitioning and clustering of the data. This helped establish distinct partitions of countries that shared similar characteristics or attributes. Countries in each partition were affected by independent variables in different ways and by different levels of severity. For example, the lower GDP countries are greatly affected by the accessibility of care while the margins in the upper GDP countries are affected by various other variables such as the political stance and population density. The use of the K Nearest Neighbor algorithm also provided interesting insights into the potential effect of geographic homogeneity on life expectancy. In summary, our study shows that there is no single best solution to health care.

PREDICTIVE ANALYTICS IN THE HUMAN RESOURCE PERFORMANCE APPRAISAL PROCESS

Emily Elder, Siena College
Dr. Necip Doganaksoy, Siena College

ABSTRACT

Data Analytics is a rapidly growing field in 2022 and its influence is expanding into business areas that are just now recognizing its growing importance. Many companies are beginning to see the value in using data analytics in their Human Resource departments. This project provides an example of how predictive analytics can be used in the field of HR. The performance appraisal process is one of the largest annual activities that an HR department completes each year. The process can take months to complete and is essential in understanding employee contributions to business performance. Using a fictitious dataset from kaggle.com the goal of this project was to build models that would successfully classify performance appraisal raw text into distinct categories. First, we used text processing to develop a Data Term Matrix for the terms used in employee appraisals. Subsequently, these terms were used as the sole inputs into various techniques (e.g., K-nearest neighbors, partitioning, naive Bayes, and neural networks) to predict employee performance. Even though the predictive performance of the models could use further improvement, a first pass through the data revealed that the methods offer a great deal of predictive ability. This project provides a depiction of how predictive analytics can have the ability to provide innovative value to the field of HR. We also discuss broader considerations associated with the use of algorithms in this field.

FORCED LABOR AND CHINA'S FOREIGN RELATIONS

Greta Stjade, Siena College
Madoka Weldon, Siena College
Dr. Elias Shukrulla, Siena College

ABSTRACT

For years, China has experienced unprecedented levels of growth. There is ample empirical evidence that the country with the world's highest population has yielded tremendous results by employing its own citizens and adopting a targeted export-led economic strategy. Although China has provided their citizens with jobs and consequently raised the median per capita income as well as the country's yearly GDP growth rate by around 8-9% each year, doing so has come at a cost that is considered cruel and unusual by the standards of other economically-thriving countries.

China's recent efforts toward the Belt and Road initiative have not just instilled fear into the West that China's growth is becoming uncontrollable, but fear that their practices are severe enough to take action. The Belt and Road initiative aims to connect Asia, Africa, the Middle East and Europe through Chinese-funded ports, bridges, 5G networks and other infrastructure. However, it is built on the backs of people who researchers say face exploitation that has only been exacerbated by the pandemic.

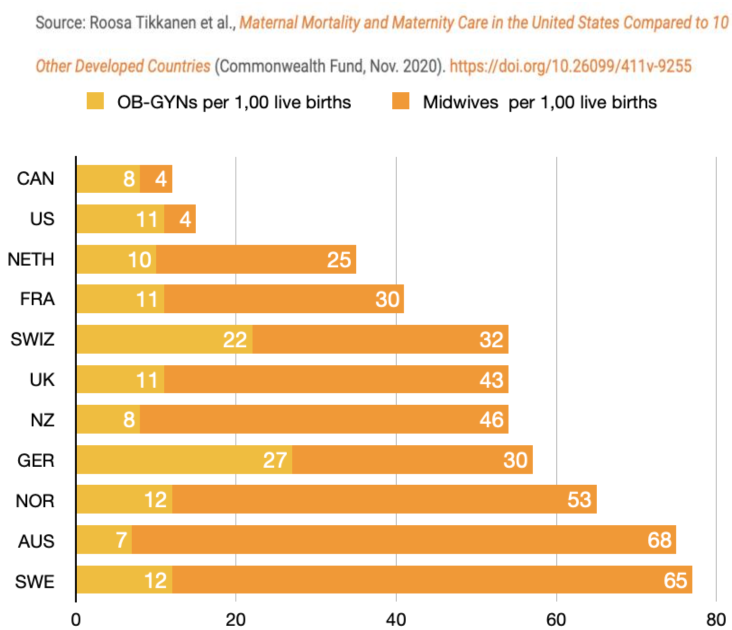
Chinese workers that are employed by state-owned companies and subcontractors describe abuses that include being held against their will, forced to work while infected with the coronavirus, having passports seized, being beaten for protesting conditions, or forced into "thought training", among other things. These reports threaten to undermine China's bid for diplomatic and economic influence, a mission closely tied to the legacy of leader Xi Jinping. Although some efforts have been made legally to bring attention to the issue, popular American companies continue to operate in China and until further social pressures are applied, we believe that these practices will continue, particularly for the Belt and Road initiative.

THE POTENTIAL OF MIDWIVES AS MATERNAL CARE PROVIDERS IN THE UNITED STATES

Olivia Durant, Siena College
Madison Tamblin, Siena College
Dr. Ashley Provencher, Siena College

INTRODUCTION

In 2021, the United States spent approximately $1.235 billion on maternal health care (The U.S. Government and Global Maternal and Child Health Efforts, 2021). Compared to other OECD countries, the United States spends more per person on healthcare than any other country (Wager, Ortaliza & Cox, 2022). Despite massive expenditures spent on the provision of healthcare, the United States has comparably worse health outcomes than other developed countries. For example, the maternal mortality rate, an instrument frequently used to measure the success of health outcomes, showed that in 2020 the maternal mortality rate for the United States had reached 23.8 deaths per 100,000 live births (Hoyert, 2021). Compared to other developed countries, the United States has the highest maternal mortality rate and has consistently failed at achieving lower maternal mortality rates (Tikkanen, Gunja, FitzGerald & Zephyrin, 2020). We will examine the potential causes of poor health outcomes for mothers and infants in the United States such as the shortage of maternal healthcare providers, the over reliance on cesarean sections, the lack of paid maternity leave, and the under usage of midwives. We will also explore why prenatal care in the United States is so expensive compared to other developed countries while discussing the potential cost savings and health benefits of implementing a midwife- led health care model in the United States as a way to improve maternal health outcomes and reduce costs.



DESCRIPTION OF THE ISSUES

The history of maternal health care in the United States is complex and the causes of poor health outcomes for both mothers and infants are complicated due to the intersectionality of various issues. The shortage of maternal care, especially in rural areas, the increased reliance on cesarean sections, the racial inequalities in maternal health care, lack of paid leave for new parents, and the under usage of midwives begin to explain why maternal health outcomes in the United States are significantly worse compared to other developed countries (Korbatov, 2015).

The forefront of the maternal health story in the United States is the shortage of both OB-GYNs and midwives seen across the nation. Obstetrical shortages make access to prenatal care difficult for women and may explain the high levels of adverse maternal outcomes seen in the U.S. (Ollove, 2016). In the U.S. there are 11 OB-GYNs and four midwives per 1, 000 births, for a total of 15 providers per 1,000 births (Tikkanen et al., 2020). In Sweden, however, there are 12 OB-GYNs and 66 midwives per 1,000 births, for a total of 78 providers per 1,000 births (Tikkanen et al., 2020). According to the American College of Nurse - Midwives about 50 percent of counties in the U.S. do not have any practicing OB-GYNs, while 56 percent do not have a nurse- midwife (Ollove, 2016). These numbers suggest that there are areas within the U.S. that are struggling for access to maternal healthcare providers. Approximately nine percent of all U.S. births are conducted by a midwife, in other countries this number sits at 50-70 percent (Rapaport, 2018). An increase in practicing midwives would help to alleviate the current OB-GYN shortage seen in the U.S and ensure that all women have access to the care they need.

While increasing the amount of birth providers, specifically midwives, would benefit the birthing system and alleviate the pressures of having a shortage of health providers, there is a large stigma surrounding the use of midwives and at-home births compared to a traditional hospital birth with a practicing OB-GYN. Even if there was a mass influx of midwives into the medical system, the stigma surrounding their usage and the fear associated with a home birth being more dangerous would prevent those midwives from being effectively used. The social norms and expectations surrounding birth in the U.S. are heavily influenced by a pathological perspective where birth is viewed as painful, dangerous, and gross instead of being natural. In addition, midwives as a profession have a negative connotation surrounding them; they are often viewed as less competent compared to an OB-GYN who is viewed as the proper care in such situations. This in combination with the lack of education about the midwifery profession creates a socially driven barrier to using midwives. Once the stigma is removed, the influx of midwives will be beneficial to alleviating the burden of the current health system and helping improve maternal health outcomes. Midwifery care is safe for low-risk births and helps prevent unnecessary medical interventions. It also is helpful in rural areas where mothers might not have access to traditional birthing centers in hospitals. At home births with midwives can help reduce the systemic racism seen in the medical industry, and with recent events such as COVID-19, an at-home birth is seen as more desirable as many hospitals were limiting the amount of visitors and were already overburdened with the influx of patients due to the pandemic (Rubashkin, 2021).

Health insurance plays a large role in the U.S. healthcare system as it affects the access and utilization of certain health services. The lack of widespread coverage of midwife led care acts as another constraint to the utilization of midwives as a maternal health provider in the U.S. The Affordable Care Act (ACA) made it mandatory that all major healthcare plans provide coverage for maternal health care (*Health Insurance and Pregnancy 101*, n.d.). Prior to this being passed in 2014, only nine states required this provision (*Health Insurance and Pregnancy 101*, n.d.). This mandate, however, does not require coverage of alternative birthing methods such as midwife led care. As can be seen in the table titled Midwives with National Recognized Credentials some insurers cover midwives only in a birthing center or hospital center, while others provide comprehensive coverage. The state by state disparities in coverage/licensure creates a barrier for women to choose this type of care while also restricting the entrance of midwives into the market of maternal health as providers. Furthermore, it's up to the patient to research their health insurance plan in order to discover their coverage. This results in asymmetric information in the space of maternal healthcare between health insurers and patients, acting as another barrier to the utilization of midwives.

In addition to a nationwide shortage of maternal health care providers, the United States has one of the highest rates of cesarean sections in the world, at 32 percent of total births (Montoya-Williams et al., 2017). The World Health Organization concludes while c-sections are beneficial in helping to reduce the maternal mortality rate, it is only up to 10 percent of births and is based off countries that have the lowest perinatal mortality rates and have cesarean section rates below 10 percent; beyond this threshold the marginal benefits start to diminish (Montoya-Williams et al., 2017). Once the threshold is surpassed, the negative effects begin to take hold, resulting in higher infant and maternal mortality, along with increased difficulty with future pregnancies and deliveries (Montoya-Williams et al., 2017). There is also growing concern over the increased use of low-risk c-sections among first births, as this can lead to concern over being able to perform a vaginal delivery after c-section (VBAC) (Montoya-Williams et al., 2017). Although VBACs are becoming increasingly more popular they are riskier, therefore, women that have already had a c- section may be on the trajectory to have all of their babies that way, further increasing the rate of c-sections. Some potential reasons for the increased reliance on cesarean sections are financial incentives, access to maternal care and differences in birthing practices, and the fear of malpractice lawsuits among physicians (Montoya-Williams et al., 2017).

Another concern in regards to the United States' cesarean section rate is the large amount of low-risk c-sections being performed. A low-risk c-section rate is defined as, "percentage of singleton, head-first, term (37 or more completed weeks) first births that were cesarean deliveries" (*Explore Low-Risk Cesarean Delivery in the United States*, 2019). Although elective, low-risk c-sections are not recommended by the American Council of Gynecologists and Obstetricians, they continue to be performed and cause higher rates of neonatal mortality and pose much higher risks to both mother and baby, including postpartum hemorrhage and uterus lining infection (*Explore Low-Risk Cesarean Delivery in the United States*, 2019). These high risks post c-section, if not treated, can contribute to the high rate of maternal mortality. Midwives, however, are linked to lower rates of cesarean sections compared to rates seen under the care of an OB-GYN (Carroll, 2019). This can be attributed to the fact that midwives as maternal health care providers operate under a different standard of care than obstetricans. Midwives take a holistic approach to maternal health that is orientated around patient autonomy, decision making, and natural birth; the mother and baby are the central focus of midwives. Therefore, under midwifery care there is a reduced risk of invasive and unnecessary medical procedures that are not only costly but increase negative outcomes for mother and infant.

Another weakness in maternal health care in the United States is that it is the only country in the developed world that does not offer paid maternity leave at the federal level; most other countries on the same economic level guarantee a minimum of 14 weeks of paid maternity leave (Tikkanean et al., 2020). Paid maternity leave allows for mothers to adjust to the psychological and physiology challenges associated with birth (Tikkanen et al., 2020). Additionally, 52 percent of pregnancy related deaths in the United States occur in the postpartum period (days 1- 365), highlighting the importance of postpartum care (Tikkanean et al., 2020). Furthermore, other high income countries, such as the Netherlands, Germany, and Norway have nurses and midwives do home visits for 10 or more days following a birth, all of which is covered under national health insurance (Tikkanean et al., 2020). These visits help with the adjustment to parenthood while simultaneously ensuring that mother and infant are in good health. Additionally, it has been proven that this practice improves mental health and breastfeeding outcomes while reducing long run healthcare costs (Tikkanean et al., 2020).

The fundamental issues in the United States maternal health care model are then exacerbated by membership to a minority group. Midwives, however, with their increased commitment to equity, equality, and women's autonomy can be used to bridge the racial disparities seen in maternal health (Austin, 2022). For example, the U.S. maternal mortality rate in 2019 for non-Hispanic black women was 44 deaths per 100,000 live births compared to 17.9 for non-Hispanic white women (Hoyert, 2021). Potential explanatory factors for the observed disparities are socioeconomic factors, pre-pregnancy care, prenatal factors, and the quality of hospitals (Oribhabor, Nelson, Buchanan- Peart & Cancarevic, 2020). Social, economic, and structural disparities seen between racial groups contribute to disparities seen in health. For example, the poverty rate for black Americans is 20.8 percent while in comparison the poverty rate for non-Hispanic whites is 8.1 percent (Oribhabor, et al. 2020). Poverty affects accessibility to insurance and high quality prenatal care, therefore underinsurance or lack of access to care increases health risks for black mothers and infants. Additionally, pre-pregnancy care, which is the care given to a woman before pregnancy, is correlated with successful birth outcomes (Oribhabor, et al. 2020). However, minority and ethnic groups have higher rates of obesity, hypertension, and diabetes all of which are correlated to adverse birth outcomes (Oribhabor, et al. 2020). Prenatal care is also critical for successful maternal outcomes as it screens for risk factors while encouraging healthy behaviors during pregnancy (Oribhabor, et al. 2020). There is a correlation between fewer prenatal visits and poor outcomes such as low birth weight and infant mortality (Oribhabor, et al. 2020). However, despite this research, women in racial and ethnic groups consistently have lower rates of prenatal care in the first trimester (Oribhabor, et al. 2020). There are a multitude of reasons why this may be occurring including, insurance, accessibility in terms of transportation, and lack of culturally competent care (Oribhabor, et al. 2020). Furthermore, emerging research has suggested that women of racial and ethnic minorities deliver more frequently in hospitals that are of a worse quality (Oribhabor, et al. 2020). All of these potential factors begin to explain why maternal mortality rates are higher in minority groups.

ECONOMIC ANALYSIS

The theory of physician induced demand can be applied to understand the over usage of cesarean sections in the U.S. maternal health care model. Physician induced demand is a phenomenon in which a physician uses their agency power, exacerbated by asymmetric information between patient and physician, as a way to influence a patients' demand in a way that favors their incentives. The shortage of maternal health care providers, the falling fertility/birth rates since the 1970s, and the increased risk of malpractice are all possible reasons that there has been an increased usage of cesarean sections in the United States. It is possible that declining fertility rates has resulted in a reduction of the number of patients available to OB- GYNs (Gruber & Owings, 1996). This reduction in patients then causes a potential reduction in income, however, instead of letting their incomes fall, procedures such as cesarean sections which cost more and are more reimbursable, may be recommended to patients by OB- GYNs in order to compensate for income loss. The graph labeled Physician Induced Demand for Cesarean Sections Theoretical Graph demonstrates the effect of physician induced demand on the cesarean section service market. The increase in demand for cesarean sections as can be seen in the graph increases not only the number of cesarean sections provided but also increases the price of maternity care, which begins to explain the high costs of labor and delivery seen in the U.S. On average cesarean sections are more expensive than vaginal births, in addition, they are more efficient from a physician's perspective as they can be scheduled ahead of time and on average take less time than a natural birth (Gruber & Owings, 1994, pg. 102). These benefits of cesarean sections can help a physician recover potential losses in income because they are getting paid more for each procedure while maximizing their time by reducing unscheduled procedures.

Additionally, higher risk of malpractice in obstetrics may increase the usage of cesarean sections as a form of defensive medicine. According to the American Medical Association in the early to mid 1980s malpractice premiums rose and liability expenses increased from 4.0 to 10.3 percent of gross income for OB- GYNs while gross income grew less for OB-GYNs compared to other physicians (Institute of Medicine, 1989). The high rates of malpractice premiums could have acted as another financial strain on the incomes of OB- GYNs further incentivizing the usage of cesarean sections. It is possible that in order to reduce the risk of malpractice OB- GYNs engage in more intensive and expensive medical practices.

Under the current model of obstetrician led care U.S. maternity care is one of the most expensive in the world with a median cost of $13,524 for a hospital delivery (SwedesTeam, n.d.). However, maternal health care costs can be reduced with the integration of midwives. Estimated savings under midwifery-led care is approximately $2,000 per patient; if usage rates of midwives increased from the current 9 percent of all births to 20 percent an estimated $618 million would be saved (Attanasio, Alarid-Escudero & Kozhimannil, 2019). Not only would it save money but an increase usage of midwives is projected by 2027 to prevent 30,000 preterm births and 120,000 episiotomies, an incision of the perineum to prevent vaginal tearing that also increases the risk of infection, pain during sex, and bleeding (Attanasio, Alarid- Escudero & Kozhimannil, 2019). The reduction of preterm births, cesarean sections, and episiotomies found under midwife led care would have long term cost savings for the U.S. healthcare system.

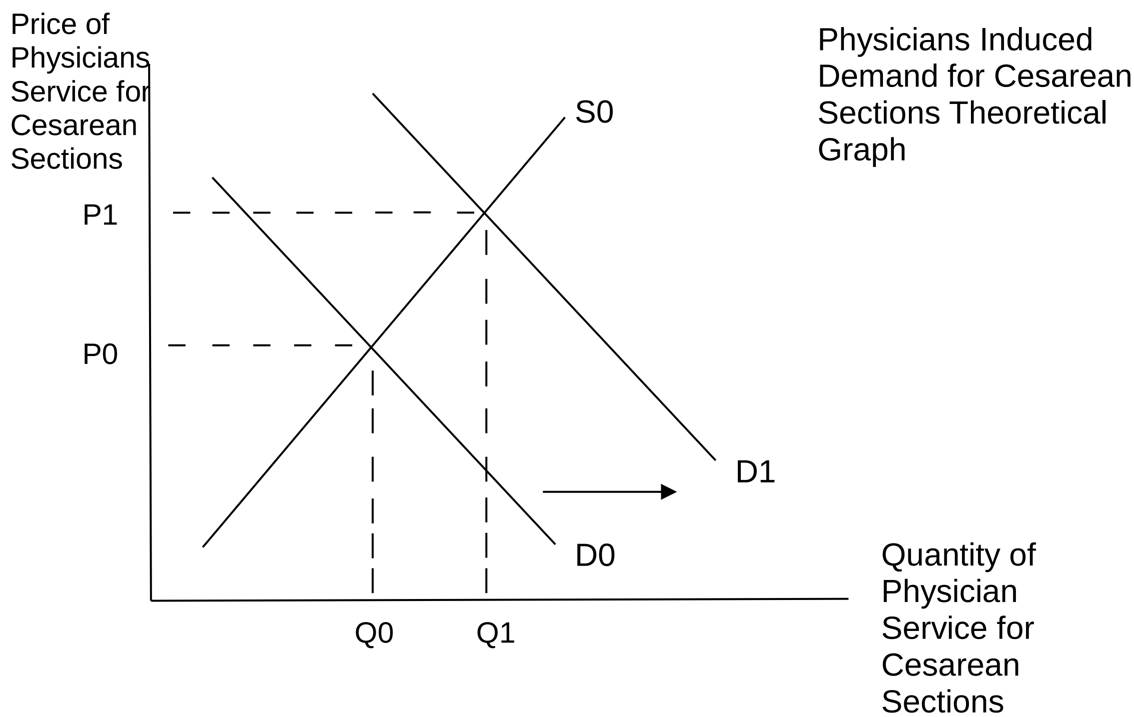
RECOMMENDATION

Given the potential cost savings and associated better outcomes under midwifery led care in the space of maternal health we recommend the integration of midwives into the U.S. model of maternal health care. We feel that the number one policy that should be implemented is in accordance with the National Partnership for Women and Families Staff suggestion to increase the supply of midwives (National Partnership for Women & Families Staff, 2021). In the long run this will not only address the shortage of maternal health care physicians but also mitigate the over usage of cesarean sections due to physician induced demand. This can be done by incentivizing midwife education through increased federal funding and loan repayment for those who choose this profession.

In addition, address the barriers to practice that prevent midwives from being accessible such as licensing requirements and insurance coverage. Licensure requirements and comprehensive insurance coverage for midwives differ across state lines as can be seen in the table labeled Midwives with National Recognized Credentials. The state to state disparity makes comprehensive midwifery care hard as states have different regulations about what type of midwife is recognized, covered, and even where midwives can practice. In order to remove these barriers that restrain midwives as maternal health care providers we recommend making all forms of midwifery recognized by state governments in all settings. Additionally, make their coverage comparable to those of OB- GYN care as a way to remove financial barriers and incentives in terms of maternal health care providers.

Lastly, it is essential that policy makers understand the socio-cultural barriers surrounding the implementation of midwives into maternal health. This includes the racial disparities that if not careful addresses can be exacerbated by midwives (Austin, 2022). In order to avoid further racial and ethnic disparities in the space of healthcare we suggest identifying underserved areas and providing support to those areas. Additionally, increase the supply of minority midwives as a way to increase diverse, racially competent health care workers. Furthermore, the social norms that surround birthing practices need to be addressed so that midwives are accepted into the maternal health care world. This can be done in numerous ways such as increased education about the practice of midwives, their philosophies, services offered, and qualifications. Additionally, partnerships and cooperation between OB- GYNs and midwives would not only increase confidence in the abilities of midwives but help create safe birthing plans that take into account the mothers wishes and needs. Overall, the United States must implement policies that support the integration of midwives into maternal health care.

GRAPHS AND TABLES



Midwives with Nationally Recognized Credentials: CMNs, CMs, and CPMs

Credential	**Degree**	**Setting**	**Legal Recognition**	**Medicaid Coverage**
Certified nurse-midwife (CNM)	RN + master's degree	Hospital, birth center, home	All states, DC, U.S. territories	Yes, by federal statute
Certified midwife (CM)	Bachelor's + master's degree	Hospital, birth center, home	9 states; DE, HI, ME, MD, NJ, NY, OK, RI, VA	4 states: ME,MD,NY, RI
Certified professional midwife (CPM)	High School diploma or equivalent; may earn certificate associate's bachelor's or master's degree	Birth center, home	34 states + DC (all except CT, GA, IA, IL, KS, MA, MO, MS, ND, NE, NC, NY, NV, OH, PA, WV and U.S. territories)	15 states + DC: AK, AZ, CA, DC, FL, ID, MN (birth centers only), NH, NM, OR, SC, TX (birth center only), VA, VT, WA, and WI

Source: National Partnership for Women & Families Staff. (2021, October). Improving our Maternity Care through Midwifery . In *National Partnership for Women & Families* . Retrieved from https://www.nationalpartnership.org/our-work/resources/health-care/maternity/improving-maternity-midwifery.pdf

Cesarean Rate in the United States from 1970 to 1993

TABLE 1. Number of live births; estimated rate of cesarean deliveries, by type; estimated number and percentage of cesarean deliveries, by type; and estimated number and rate of vaginal births after a previous cesarean delivery, by year -- United States, selected years, 1970--1993

		Cesarean rate		Cesarean deliveries *				Vaginal birth after a previous cesarean	
					Repeat +				
Year	No. live births &	Primary @	Overall **	No. primary &	No. &	(%)	Total&	No. * &	Rate ++
1993	4039 &&	16.3	22.8	585	336	(36.5)	921	115	25.4
1992	4084	16.8	23.6	605	359	(37.2)	964	119	25.1
1991	4111	17.1	23.5	628	338	(35.0)	966	108	24.2
1990	4158	16.8	23.5	626	351	(35.9)	977	90	20.4
1989	4041	17.1	23.8	620	342	(35.6)	962	78	18.5
1988	3910	17.5	24.7	615	351	(36.3)	966	50	12.6
1987	3809	17.4	24.4	601	328	(35.3)	929	36	9.8
1986	3757	17.4	24.1	595	310	(34.3)	905	29	8.5
1985	3761	16.3	22.7	559	295	(34.6)	854	21	6.6
1980	3612	12.1	16.5	418	178	(29.9)	596	6 @@	3.4 @@
1975	3144	7.8	10.4	238	89	(27.1)	327	2 @@	2.0 @@
1970	3731	4.2	5.5	153	52	(25.2)	205	1 @@	2.2 @@

* Estimated by applying cesarean rates derived from the National Hospital Discharge Survey to the number of live births from national vital registration data.
+ Proportion of all cesareans that are repeat cesareans; standard error does not exceed 1.8% for any year.
& In thousands.
@ Number of first cesareans per 100 deliveries to women who had no previous cesarean delivery; standard error does not exceed 1.1% for any year.
** Number of cesarean deliveries per 100 deliveries; standard error does not exceed 1.5% for any year.
++ Number of women who had a vaginal birth after a previous cesarean delivery per 100 deliveries to women who had a previous cesarean delivery; standard error does not exceed 1.3% for any year.
&& Provisional data.
@@ Number does not meet standards of reliability or precision because the weighted numerator is <10,000 deliveries.

Source: Rates of Cesarean Delivery -- United States, 1993. (1995, August). In the Centers *for Disease Control and Prevention*. Retrieved from https://www.cdc.gov/mmwr/preview/mmwrhtml/00036845.htm#00001044.htm

REFERENCES

Attanasio, L. B., Alarid-Escudero, F., & Kozhimannil, K. B. (2020). Midwife-led care and obstetrician-led care for low-risk pregnancies: A cost comparison. *Birth (Berkeley, Calif.)*, *47*(1), 57–66. https://doi.org/10.1111/birt.12464

Attanasio, L. B., Alarid-Escudero, F., & Kozhimannil, K. B. (2019). *More midwife-led care could generate cost savings and health improvements*. University of Minnesota school of public health.https://www.sph.umn.edu/sph-2018/wp-content/uploads/docs/policy-brief-midwife-led-care-nov-2019.pdf

Austin, K. (2020, February 2). End Racial Disparities in Maternal Health, Call a Midwife. In *Columbia Mailman School of Public Health* . Retrieved from https://www.publichealth.columbia.edu/public-health-now/news/end-racial-disparities-maternal-health-call-midwife

Carroll, L. (2019, October). Fewer C-sections when low-risk deliveries handled by midwives. In *Reuters*. Retrieved from https://www.reuters.com/article/us-health-birth-midwives/fewer-c-sections-when-low-risk-deliveries-handled-by-midwives-idUSKBN1WP38D

Explore Low-risk Cesarean Delivery in the United States | 2021 Health of Women And Children Report. (2019). America's Health Rankings. Retrieved March 29, 2022, from https://www.americashealthrankings.org/explore/health-of-women-and-children/measure/low_risk_cesarean/state/ALL

Gruber, J., & Owings, M. (1996). Physician financial incentives and cesarean section delivery. *The Rand journal of economics*, *27*(1), 99–123.

Hartman, M., Martin, A., Washington, B., & Catlin, A. (2015). National Health Care Spending in 2020: Growth Driven by Federal Spending in Response to the Covid-19 Pandemic. *Health Affairs*, *41*(1).

Health Insurance and Pregnancy 101. (n.d.). eHealth. Retrieved March 29, 2022, from https://www.ehealthinsurance.com/resources/guide/everything-you-need-to-know-about-health-insurance-and-pregnancy

Hoyert, D. (2021). Maternal Mortality Rates in the United States, 2019. National Center for Health Statistics. https://www.cdc.gov/nchs/data/hestat/maternal-mortality-2021/maternal-mortality-2021.htm

Institute of Medicine (US) Committee to Study Medical Professional Liability and the Delivery of Obstetrical Care, Rostow, V. P., & Bulger, R. J. (Eds.). (1989). *Medical Professional Liability and the Delivery of Obstetrical Care*: Volume II. National Academies Press (US).

Korbatov, A. B., & De Souza, R. (2022, January 11). *What Explains the United States' Dismal Maternal Mortality Rates?* Wilson Center. Retrieved March 7, 2022, from https://www.wilsoncenter.org/event/what-explains-the-united-states-dismal-maternal-mor tality-rates

Montoya-Williams, D., Lemas, D., Spiryda, L., Patel, K., Neu, J., & Carson, T. (2017). What are Optimal Cesarean Section Rates in the U.S. and How Do We Get There? A Review of Evidence-Based Recommendations and Interventions. *Journal of Women's Health*.

National Partnership for Women & Families Staff. (2021, October). Improving our Maternity Care through Midwifery. In *National Partnership for Women & Families.* Retrieved from https://www.nationalpartnership.org/our-work/resources/health-care/maternity/improving-maternity-midwifery.pdf

Oribhabor, G. I., Nelson, M. L., Buchanan-Peart, K. R., & Cancarevic, I. (2020). A Mother's Cry: A Race to Eliminate the Influence of Racial Disparities on Maternal Morbidity and Mortality Rates Among Black Women in America. *Cureus*, *12*(7), e9207. https://doi.org/10.7759/cureus.9207

Ollove, M. (2016, August 15). A Shortage in the Nation's Maternal Health Care. In *Pew Trus*. Retrieved from https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2016/08/15/a-shortage-in-the-nations-maternal-health-care

Rapaport, L. (2018, March 9). *U.S. states with more support for midwives have better birth outcomes*. Reuters. Retrieved March 6, 2022, from https://www.reuters.com/article/us-health-childbirth-midwives/u-s-states-with-more-supp ort-for-midwives-have-better-birth-outcomes-idUSKCN1GL2ZI

Rates of Cesarean Delivery -- United States, 1993. (1995, August). In the Centers *for Disease Control and Prevention*. Retrieved from https://www.cdc.gov/mmwr/preview/mmwrhtml/00036845.htm#00001044.htm

Rubashkin, N. (2021, March 9). I'm an Obstetrician. Stop Stigmatizing Home Births. We tend to think of them as needlessly risky, but things can go wrong in any setting. In *Slate* . Retrieved from https://slate.com/technology/2021/03/home-birth-obstetrician-stigma.html

SwedesTeam. (n.d.). How Much Does It Really Cost To Have A Baby?. In *Swedish American a Division of UW Health* . Retrieved from https://www.swedishamerican.org/swedes-health-blog/how-much-does-it-really-cost-have-baby

The U.S. Government and Global Maternal and Child Health Efforts . (2021, July 28). In *Easier Family Foundation*. Retrieved from https://www.kff.org/global-health-policy/fact-sheet/the-u-s-government-and-global-maternal-and-child-health-efforts/

Tikkanen, R., Gunja, M., FitzGerald, M., & Zephyrin, L. (2020, November 18). *Maternal Mortality Maternity Care US Compared 10 Other Countries*. Commonwealth Fund. Retrieved March 6, 2022, from https://www.commonwealthfund.org/publications/issue-briefs/2020/nov/maternal-mortali ty-maternity-care-us-compared-10-countries

Vedam, S., Stoll, K., MacDorman, M., Declercq, E., Cramer, R., Cheyney, M., Fisher, T., Butt, E., Yang, Y. T., & Powell Kennedy, H. (2018). Mapping integration of midwives across the United States: Impact on access, equity, and outcomes. *PloS one*, *13*(2), e0192523. https://doi.org/10.1371/journal.pone.0192523

Wager, E., Ortaliza, J., & Cox, C. (2022, January 21). How does health spending in the U.S. compare to other countries? *Peterson- KFF HealthSystem Tracker*. Retrieved from https://www.healthsystemtracker.org/chart-collection/health-spending-u-s-compare-countries-2/

Compression X

Keeping You In The Game And Not On The Sidelines

Company Profile

Industry
Compression Therapy

Founded
2020

Employees
4

Location
Albany, NY

Vertical
Injury prevention in the compression therapy market

Executive Team
Meg Giordano
Maddy Dunigan
Jake Derian
Ryan Lynch

Summary

CompressionX is an innovative injury prevention compression sleeve. The sleeve contains multiple technological features including pulse technology, sweat sensors, and biomechanical sensors. CompressionX offers users the ability to track bodily data while the user is engaged in physical activity. We aim to make sure you can keep your focus on your sport and not worry about when your next injury will take you out.

Problem

There is a need for injury prevention compression gear in the compression therapy market. Up to 55% of athletes' injuries are muscular, making it the most common form of injury for athletes. This shows there is a glaring issue that has yet to be provided a convincing solution. This problem of muscular injury cannot necessarily be completely solved, such as car accidents or getting sick. But, measures have been taken to prevent such occurrences from happening so frequently, and in many cases, ever happening at all. Our product works to prevent muscular injuries with the integration of technological attributes in a compression sleeve. Muscular injuries can be chronic for some people, meaning they have to deal with the greater risk of reinjuring themselves during physical activity. CompressionX hopes to help contain this issue for all, regardless of their medical or injury history.

Solution

CompressionX offers technology that will help prevent injuries. With the use of pulse technology and sweat sensors we can track data such as blood flow and dehydration to help prevent injury while serving as an arm sleeve. The app that is offered with our product tells your body what they need and indicates where there is an increased probability of getting injured.

Target Market

Our target market will reach those who enjoy working out, we found that about 64 million Americans. We then focused our research on those who enjoy working out but also own a smartphone. In order to use our product effectively you will need a smartphone to track your information that comes directly from your CompressionX sleeve. Going off of that, looking at professional and collegiate athletes will also be a huge focus in our target market. We found that 1.1 million Americans are considered to be high level athletes. Overall, our ideal target market will focus on high level athletes who own a smartphone as in those wanting to play in college, semi-professional sports, and professional sports. This market will target about 1 million Americans as a whole.

Competitive Advantage

Our main competitors are Nike, Under Armor, Lymphedema, and Hyperice.

Nike: Offers basic compression sleeves at a cost ranging from $15-$30. Nike has strong brand awareness and is an established company making over $37 billion in sales.

Under Armor: Offers basic compression sleeves at a cost ranging from $13-$25. Under Armor has strong brand awareness with their customers and made about $4 billion in sales the past year

Lymphedema: Offers compression sleeves to help treat lymphedema and other related health issues. Their sleeves are priced between $59- $100.

Hyperice: Includes high levels of technology which allows consumers to focus compression into one area. Their products range in price from $899-$1,600. Hyperice is an established company making over $200 million in sales in 2020.

CompressionX differs from our competition based on quality, technology, and functionality. CompressionX was created specifically for athletes by athletes. The compression material was chosen to ensure the longevity of the product. CompressionX also features technology such as Pulse technology, sweat sensors, and biomechanical sensors in order to help athletes track their workouts and prevent injury. Since these technological elements are embedded in the sleeve, athletes are able to track their data while participating in their activity.

Business Model

CompressionX functions on two primary forms of income, with that being both initial purchases of the compression sleeve and a subscription base model that follows. The sleeve sells for $75. The subscription offers 3 options: 1 month at $9.99, 3 months at $19.99, or the annual fee of $99.99. Without the subscription, users will not be able to view the data the compression sleeve collects. Our path to market is to initially target high-level athletes, as we believe the precision and detail of our product most suits their initial interests. Our main channel will be online sales, in addition to sales made at sporting tournaments, games, showcases, etc. We then plan on expanding our target market and reaching into other industries, such as the insurance agency, alluding to the versatility of our product to serve as a medical device as well. Insurance companies can incentivize consumers to use this product and receive savings in return, as they are to reduce muscular injuries. Our key revenue driver comes from our subscription model, which would generate recurring revenues. Our main costs include manufacturing and marketing, as our product has no brand recognition elements attached to it, in addition to needing to manufacture our product for the first time.

NEX-TV

Company Profile

Industry
Technology & Electronics

Founded
2021

Employees
N/A

Location
Albany, NY

Vertical
Portable television and electronics in the luxury and camper/RV markets

Executive Team
Chad Buckley
Liam Hickey
Simon Santos

Summary

Nex-TV aspires to commercialize a different way of outdoor entertainment by allowing the consumer to bring our product wherever they please. Our product is an outdoor television that is portable. Our product utilizes new technology to enhance the viewing experience. Nex-TV will revolutionize the traditional way to watch television. Our product is Nex-TV and it is a high-tech entertainment device that is able to move wherever you want. The TV is also able to be controlled by your phone via an app. Our competition consists of stationary devices that aren't versatile for everyday life and we wanted to create a product in Nex-TV that revolutionizes the entertainment industry.

Company Team
We get the job done. We are a consistently aggressive patient team, with the motto "Keep Showing Up." Our culture focuses on positivity to deliver and embrace quality energy into everything we do. We want to create a non-hostile work environment. We want our employees to be excited to work for Nex-TV.

Technology
Our product will include solar energy, an app-based remote, off-road tires for mobility, wifi and cellular data for streaming services, plug in charge via USB, and sunshades so the screen is able to be seen outside. These features help deliver accessibility and convenience to make Nex-TV your favorite TV ever owned.

Target Market

Our target markets are the luxury and camper/RV markets. Luxury markets will include those that will keep their products at home and camper/RV markets will bring theirs with them on their joint adventures.

Competitive Advantage

Firstly, before anyone else, we compete against ourselves daily to be a mere 1% better. This small percentage will compound and set us up for success in the long-term. Other than ourselves, we compete against the whole home television and projector industry because we are introducing a new way of viewing due to the expedited capabilities of technology.

Product line

Our product will come in two different sizes. We will offer 60 and 50 inch TV's under the Nex-TV brand name. The 60" television will sell for $6,500 and the 50" television will sell for $4,999. We are offering two sizes because there are some people who want a TV that will be able to be as portable as possible without being a hassle but others will want one that will only stay at their house (see target markets). There are going to be customers that are going to have different disposable incomes and budgets for their TV's. As a company, we find that a variance in sizes and prices for our products will help maximize profits.

Commercialization

Before placing the Nex-TV on the market, we need to ensure quality. For the first one to three years, we will be marketing word of mouth. What our purchased customers say about our product matters. Therefore, we will take a minimum of one year to build the product and minimize any needed bug fixes. We will be in the direct-to-consumer market. Because it is important what our customers say, we will hand deliver with an included lesson on the set up on the Nex-TV.

Forecast results

	Actual results		Forecast results				
	Prev. FY	Curr. FY	Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5
Revenues			203,000	2,375,000	4,780,000	7,600,000	9,800,000
Expenses			-1,080,000	-2918000	-4,620,000	-7,000,000	-8,800,000
Net Income	0	0	-877000	-543,000	160,000	600,000	1,000,000

Financial Req'ts and deal structure

Nex-TV seeks two rounds for investment of $1.2M (for year 1) and $700,000 (for year 2). We believe that this amount is a sufficient benchmark to propel the company forward. In Year 1, Nex-TV will not start selling our product until Q4. We want to focus on the development of our product before launching it. Initially, we are willing to provide 15% - 20% equity stake in our company. In this offering, we are open to convertible preferred stock, or common stock.

Investor Exit Strategy

Based on our facecasted results, our growth rates per year are strong. There was a huge jump from year 1 to year 2. By year 3 and beyond, there will be positive cash flows. Looking ahead, Nex-TV is very open minded to selling the business, being bought out, or a strategic merger

SoundU

Company Profile

Industry
Audiobook Industry

Founded
2021

Employees
N/A

Location
Albany, NY

Vertical
Technology and Audiobook markets

Executive Team
Veronica Forth
Hassan Omar
James Smith

Summary
SoundU seeks to provide audiobook listeners with a new way to listen to audiobooks. By using specialized software technology that picks up upon words and phrases that adds music and sound effects to those words, increasing attention span and giving listeners that immersive experience you wouldn't necessarily get from a typical audiobook. SoundU's goal is to partner with audiobook companies and publishers who are already well established in the audiobook industry.

Problem
Survey results, and interviews conducted with audiobook listeners found that more features are desired by customers than not. In fact 64% would consider listening to audiobooks more if new features were added to them. To best serve audiobook listeners new features must be created so as to attract present & future customers in the audiobook industry. Another thing we found interesting is that there is a present need to find a way to increase attention span not just for children and adults, but also people with ADHD.

Solution
Our software program will enable sound to be incorporated into audiobooks. This feature has not been seen before, and it will most likely be appreciated by audiobook listeners who are looking for something new, and exciting.

- Sounds will be customized to the book
- Offer a wide variety of sounds, from ambient noise to great movie scores
- Offers that new generation of wanting something new and exciting "immersive experience"

Note that the sound, though incorporated by a software program, will have sound engineers reviewing it so the listener receives the highest quality sound.

Target Market

Our target market is really reaching people in the United States who use technology and listen to audiobooks. In order to listen to audiobooks, you need technology. We are starting with the United States because we believe that it will be easier to reach people starting with our nation, rather than branching off and trying to do too many things at once.

Competitive Advantage

Adding more value to audiobooks through incorporation of sound and music to the background to increase attention and give readers that experience that typical audiobooks don't really have. By partnering up with companies in the audiobook industry we are also increasing their growth by helping them tap into a bigger target market.

With new offered features, we expect to break into the well established audiobook market. Such features have the potential to transform the audiobook market like sound did for film.

Business Model

SoundU plans on partnering with audiobook companies and publishing and working a royalty deal. In our first two years we will be in the negative. However from our third, fourth and fifth years we are expecting a jump in net profit. As sales increase, SoundU begins to establish itself in the audiobook industry. This feature will not only allow us to break into the already established audiobook market- it will also expand our brand in a positive way.

INVESTIGATING SOCIO-ECONOMIC FACTORS THAT ENABLES ONE TO GET VACCINATED FOR COVID-19

Kylie Martin, Siena College
Dr. Manimoy Paul, Siena College

ABSTRACT

The Corona Virus outbreak at the beginning of 2020 struck the world causing panic and changing life for everyone as they know it. It began a life of quarantining, socially distancing, and wearing a mask in public. With the distribution of the COVID-19 vaccine now in full effect for most states across America, there is hope that life may be able to return to some normalcy. However, this vaccine has sparked a lot of controversies. One's willingness to be vaccinated for COVID-19 directly relates to the perceived benefits and risks of the vaccine. We surveyed people across the US to determine what factors were most prominent among people who perceived more risks than benefits regarding the COVID-19 vaccine. The survey was conducted between Dec-2020 and March-2021. The logit regression found that (1) with higher education, the likelihood of getting vaccinated increases. (2) Republicans are more likely to avoid getting vaccinated. Contrary to the popular beliefs we found that (3) if a family member got infected with Covid-19, one is less likely to get vaccinated and also (4) if one was employed before January 2020 and unemployed after the USA was engulfed by the COVID-19 are less likely to get vaccinated.

INTRODUCTION

The Corona Virus outbreak at the beginning of 2020 struck the world causing panic and changing life for everyone as they know it. It began a life of quarantining, socially distancing, and wearing a mask in public. It brought along enormous burdens for everyone across the world. Governments had to act quickly to stop the virus from spreading even further. This was done by mass economic shutdowns and quarantines. Although this did not stop the virus completely, it has protected immune-compromised people from facing what could be a life-threatening disease.

Many people were without jobs or had to adapt to doing their jobs from home. This became a difficult task to adapt to for all professionals and students. The front-line essential workers were put at risk every day helping keep our society healthy and safe. According to the Corona Virus world meter, the Corona Virus struck the world hard, infecting approximately 30 million people and approximately 500,000 deaths in the United States alone.

With the distribution of the COVID-19 vaccine now in full effect for most states across the United States, there is hope that life may be able to return to some normalcy. However, this vaccine has sparked a lot of controversies, some people believe that the vaccine was developed too fast and has some serious risks that come with taking it. This is causing people to delay getting the vaccine or to refuse to get it at all. Vaccination has been a controversial topic for some years now, some people that believe the virus is not a threat to themselves or their family members will refuse vaccinations. However, others argue that getting the vaccine will protect themselves or family members and avoid potential health issues

Governments and Doctors across the country are advocating for these vaccines and trying to ease the worry in people's minds regarding the new COVID-19 vaccines. However, this sparks another issue, what about the people who do not trust their government or their health care providers? What factors will make them more willing to receive the vaccine? Or will this cause them to refuse it altogether? Through this survey, it analyzed what factors in one's life impact the willingness to be vaccinated against COVID-19. This allows us to better understand why people vaccinate and what helps push them towards vaccination.

One's willingness to be vaccinated against COVID-19 directly relates to one's perceived benefits and risks of the vaccine. To determine what factors are in people's lives that make them perceive more potential risks of the vaccine than benefits, we surveyed people across America to determine what factors were most prominent among people who perceived more risks than benefits with the COVID-19 vaccine.

DATA

We postulated a few Hypotheses based on existing literature (as stated below). Based on those hypotheses the survey was constructed and got approved by IRB (Siena College: Approval #1-55-21 R2). The survey was circulated among as many people as possible over Facebook, students, various employees, mostly living in the North-Eastern and Eastern region of USA (e.g., NY, MA, NH, PA, VA, FL, NC, GA) residents. We received 144 responses. And after some missing data, 104 responses were complete for the Analysis.

2.1: Postulated Hypotheses;

H1: older people more willing to get vaccinated
H2: Gender does not influence the decision to get the vaccine
H3: Latino/Blacks will be more willing to get vaccinated
H4: Higher the education, more willingness to get vaccinated
H5: Emp before, unemployed after more willingness to get vaccinated (more desire to get back to the workforce)
H6: If employed in Travel/Tourism, more willing to get vaccinated
H7: Professors are more likely to get vaccinated
H8: Law enforcement, medical and essential staff are more likely to get vaccinated
H9: If one's job was impacted by COVID, more likely to get vaccinated
H10: If Higher Income affects willingness to get vaccinated?
H11: Urban people more likely to get vaccinated
H12: Catholics are against getting the COVID vaccination
H13: Catholics and Jews are against getting the COVID vaccination
H14: Republicans are less likely to get vaccinated
H15: Having more trust in Govt, more likely to get vaccinated
H16: Having health insurance will make one more likely to get vaccinated
H17: If one is more vulnerable to COVID, more likely to get vaccinated
H18: If a family member is riskier to get COVID-19, higher likelihood of getting vaccinated
H19: If one has a pre-existing serious health condition, more likely to get vaccinated
H20: If a family member had COVID, more likely to get Vaccinated
H21: if a neighbor, friend, or colleague was infected by COVID, more likely to get vaccinated
H22: If one is afraid of injection, less likely to get vaccinated

Number of Responses Received (out of 127)			
Male	29	Located in Urban Area	63
Female	97	Located in Rural Area	62
AVG. Years Educated	16.24	Catholic	40
Works in the Medical Field	10	Jewish	4
Works in the Travel or Tourism Industry	9	Christian	29
Teacher or Professor	6	Democrat	47
Law Enforcement, Medical, or Essential Workers	13	Republican	27
Job was Impacted by COVID	65	Have Health Insurance	107
AVG. Estimated Household Income	$ 80,949	Vulnerable to COVID	37
Min	$ 0	Will be getting the COVID Vaccine	91
Max	$ 600,000	Will not be getting the COVID Vaccine	36

METHODOLOGY AND ANALYSIS

Our dependent variable is: If one is willing to get vaccinated (1 = yes, 0 = No). Because of this, we ran Logit regression with our dependent variables picked based on the above hypotheses. Logit regression is displayed below:

Table # : Logit Regression

Dependent Variable:	Logit: Step-1		Logit: Step-2		Logit: Step-3		Logit: Step-4		Logit: Step-5	
Will take the COVID vaccine	coeff	p-val	coeff	p-val	coeff	p-val	coeff	p-val	coeff	p-val
Age	0.000	0.986	-0.002	0.942						
D_Gender	0.560	0.589	0.487	0.584	0.153	0.844				
D_Ethnicity	1.362	0.473	1.173	0.473	1.279	0.410	1.264	0.405		
Yrs of Education**	0.165	0.238	0.169	0.209	0.226	0.064	0.227	0.058	0.268	0.022
Empd_bef_unemp_looking_after **	-1.911	0.118	-1.818	0.079	-1.905	0.039	-1.940	0.034	-1.599	0.052
D_Travel_toursm_Restu	-1.528	0.272	-1.595	0.240	-1.229	0.232	-1.294	0.196	-1.282	0.188
D_Teacher_Prof	0.109	0.951								
Law-enf_Med_Essential	-1.123	0.254	-1.099	0.231	-1.023	0.231	-1.049	0.217	-1.001	0.233
If_Job_Impacted by COVID	-0.016	0.983								
Average Estimated Household Income	0.000	0.528	0.000	0.553	0.000	0.221	0.000	0.232	0.000	0.348
D_Urban_Rural	0.941	0.218	0.935	0.208	0.950	0.166	0.952	0.163	0.882	0.176
D_Catholic	-20.705	0.999	-20.738	0.999						
D_Catholic_Jews	19.004	0.999	19.032	0.999						
D_Republican**	-1.102	0.223	-1.062	0.210	-1.380	0.069	-1.362	0.071	-1.273	0.072

Dependent Variable:	Logit: Step-1		Logit: Step-2		Logit: Step-3		Logit: Step-4		Logit: Step-5	
Will take the COVID vaccine	coeff	p-val	coeff	p-val	coeff	p-val	coeff	p-val	coeff	p-val
D_Trust in Govt	1.173	0.173	1.182	0.169	0.788	0.305	0.805	0.293	0.708	0.341
D_Health_Insurance	-1.223	0.416	-1.168	0.395	-0.830	0.467	-0.837	0.463		
D_Vul_Covid_yes_1	-0.340	0.733	-0.374	0.696	0.382	0.643	0.323	0.678		
You_Fam_Med_risk_Covid	-0.302	0.723	-0.302	0.714	-0.158	0.824				
Health_Cond	-0.094	0.746	-0.097	0.723	-0.094	0.693	-0.087	0.717		
FamMem_had_Covid**	-1.484	0.131	-1.423	0.113	-1.950	0.027	-1.929	0.018	-1.618	0.021
D_Frnd_neigh_colleague had Covid	-0.051	0.957								
Afraid of Injection	0.238	0.838								
Constant	0.718	0.815	0.691	0.819	-1.310	0.612	-1.371	0.593	-3.027	0.120
Obs/pred correct (%)	80.50		79.30		75.00		73.90		77.30	

RESULTS AND CONCLUSION

Hypothesis	Result		
H1: older people more willing to get vaccinated	FALSE	DNA	
H2: Gender does not influence decision to get vaccine	TRUE	DNA	
H3: Latino/Blacks will be more willing to get vaccinated	FALSE	DNA	
H4: Higher the education, more willingness to get vaccinated	TRUE		
H5: Emp before, unemployed after more willingness to get vaccinated (more desire to get back to the work force)	FALSE		significantly neg
H6: If employed in Travel/Tourism, more willing to get vaccinated	FALSE	DNA	
H7: Professors are more likely to get vaccinated	FALSE	DNA	
H8: Law enforcement, medical and essential staff are more likely to get vaccinated	FALSE	DNA	
H9: If job was impacted by COVID, more likely to get vaccinated	FALSE	DNA	
H10: If Higher Income affect willingness to get vaccinated?		DNA	
H11: Urban people more likely to get vaccinated	FALSE	DNA	
H12: Catholics are against getting vaccination	FALSE	DNA	
H13: Catholics and Jews are against getting vaccination	FALSE	DNA	
H14: Republicans are less likely to get vaccinated	TRUE		
H15: Having more trust in Govt, more likely to get vaccinated	FALSE	DNA	
H16: Having health insurance will make one more likely to get vaccinated	FALSE	DNA	
H17: If one is more vulnerable to COVID, more likely to get vaccinated	FALSE	DNA	
H18: If a family member is more risky to get COVID-19, higher likelihood of getting vaccinated	FALSE	DNA	
H19: If one has pre-existing serious health condition, more likely to get vaccinated	FALSE	DNA	
H20: If a family member had COVID, more likely to get Vaccinated	FALSE		significantly neg
H21: if a neighbor, friend, colleague was infected by COVID, more likely to get vaccinated	FALSE	DNA	
H22: If one is afraid of injection, less likeli to get vaccinated	FALSE	DNA	
Interpretation: Constant is significant: It implies some significant missing variables are hiding in the constant			

REFERENCES

Andre, Fe, et al. “Vaccination Greatly Reduces Disease, Disability, Death and Inequity Worldwide.” Bulletin of the World Health Organization, vol. 86, no. 2, 2008, pp. 140–146., doi:10.2471/blt.07.040089.

Buekow, Andrea. “Corona Research at the HCHE.” Hamburg Center for Health Economics: Universität Hamburg, www.hche.uni-hamburg.de/en/corona.html.

“Can the World Find a Good Covid-19 Vaccine Quickly Enough?” The Economist, The Economist Newspaper, www.economist.com/briefing/2020/04/16/can-the-world-find-a-good-covid-19-vaccine-quickly-enough.

Jiang, Shibo. “Don't Rush to Deploy COVID-19 Vaccines and Drugs without Sufficient Safety Guarantees.” Nature News, Nature Publishing Group, 16 Mar. 2020, www.nature.com/articles/d41586-020-00751-9.

Lazarus, Jeffrey V, et al. “Hesitant or Not? A Global Survey of Potential Acceptance of a COVID-19 Vaccine.” 2020, doi:10.1101/2020.08.23.20180307.

Neumann-Böhme, Sebastian, et al. “Once We Have It, Will We Use It? A European Survey on Willingness to Be Vaccinated against COVID-19.” The European Journal of Health Economics, vol. 21, no. 7, 2020, pp. 977–982., doi:10.1007/s10198-020-01208-6.

Ramsey, Meagan A., and Cecile A. Marczinski. “College Students’ Perceptions of H1N1 Flu Risk and Attitudes toward Vaccination.” Vaccine, vol. 29, no. 44, 2011, pp. 7599–7601., doi:10.1016/j.vaccine.2011.07.130.

Ritvo, Paul, et al. “Vaccines in the Public Eye.” Nature Medicine, vol. 11, no. S4, 2005, doi:10.1038/nm1220.

Steinhauer, Jennifer. “Public Health Risk Seen as Parents Reject Vaccines.” The New York Times, The New York Times, 21 Mar. 2008, www.nytimes.com/2008/03/21/us/21vaccine.html.

Wong, Li Ping, et al. “The Use of the Health Belief Model to Assess Predictors of Intent to Receive the COVID-19 Vaccine and Willingness to Pay.” Human Vaccines & Immunotherapeutics, vol. 16, no. 9, 2020, pp. 2204–2214., doi:10.1080/21645515.2020.1790279.

“ United States.” Worldometer, www.worldometers.info/coronavirus/country/us/.

THE EFFECTS OF COVID-19 ON CAMPBELLS SOUP COMPANY'S WACC

Russell Beck, Siena College
Frida Muth, Siena College
Jared Slovic, Siena College
Dr. Fang Zhao, Siena College

INTRODUCTION

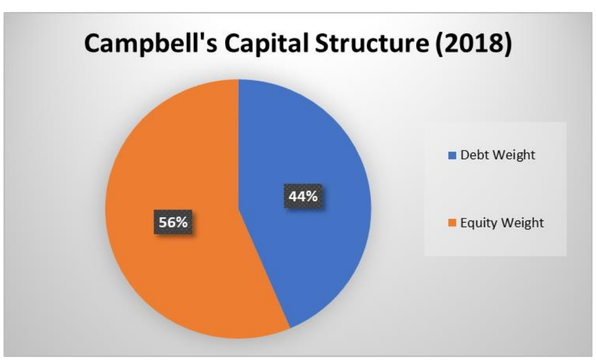
This report will take a deep dive into the derivation of Campbell's weighted average cost of capital (WACC) and specifically how the Covid - 19 pandemic impacted Campbell's cost of capital. We will outline the fiscal years: 2018, 2020, and 2021 to demonstrate how Campbell's capital structure changed, how debt and equity financing fluctuated, and how Campbell's stock volatility changed through the use of beta. We will derive WACC using multiple methods to calculate the cost of equity which include the dividend growth model, CAPM, and the own-bond-yield-plus-judgemental-risk-premium model. Along with this, we will use Bloomberg's estimate of Campbell's historical beta along with the pure play approach to find beta. By using multiple variations to calculate the inputs in the WACC equation, we firmly believe that our cost of capital estimates are as accurate as possible. The equation below will be used periodically to calculate each WACC. For simplicity purposes, we will be only using after-tax cost of debt figures and since Campbell's doesn't issue preferred stock, that will not be included in the cost of capital formula.

$$\square\square\square\square = \square_{\square} \times \square_{\square}(1 - \square) + \square_{\square} \times \square_{\square}$$

While we are confident that our cost of capital numbers are accurate, we will juxtapose these findings with Bloomberg's estimates to ensure that our calculations are within reason. After careful analysis of the WACC at each period of time, we will conclude with interpretation and further analysis of the impact of Covid - 19 on the cost of capital for Campbell.

PRE COVID-19 PANDEMIC (2018)

In every WACC calculation, the weights of equity and debt must be determined first. In 2018, Campbell's operated with a relatively balanced capital structure composed of 44% debt and 56% equity. To find these numbers, we added Campbell's short-term and long-term debt to equal $9.516 billion and divided that by the total debt added to the market capitalization. Please view the chart below:



2018	Market Value or Book Value (in million)	Weight
Debt	$9,516 .00	43.57%
Equity	$12,322.90	56.43%
Total	**$21,838.90**	

Beginning with the cost of debt, we used Bloomberg's after-tax cost of debt estimate of 3.6%. It is important to note that interest rates were at much higher levels when compared to the years after the onset of Covid - 19, causing an increase in the cost of borrowing. Out of the three years we are analyzing, 2018 yielded the highest cost of debt.

Moving to the cost of equity, we used the dividend growth model, CAPM, and the bond yield plus judgment methods to derive an equally weighted cost of equity figure. The equation for the dividend growth model is shown below:

$$\square_{\square} = \frac{\square_{1}}{\square_{0}} + \square$$

Campbell's dividend in 2018 came in at $0.35 and a stock price of $42.81 as of April that year.[1] While there are a handful of ways to calculate the perpetuity growth rate, sometimes termed as "little g" we believed that a weighted average of the GDP growth rate and analyst estimates was most appropriate. Using this model to derive the growth rate, we placed 50% weight on Yahoo analyst estimates of 1.75% and 50% weight to a 3% GDP growth rate.[2] With these inputs, we estimated a growth rate of 2.375%. The dividend growth model yielded an estimated cost of equity of 3.193%.

The next estimation technique for estimating the cost of equity is CAPM. The equation for CAPM is below:

$$\square_{\square} = \square_{\square} + \square(\square_{\square} - \square_{\square})$$

As of 2018, the risk-free rate taken from Bloomberg was 2.739% and the risk of the market was 7.335%.[3] Rather than solely taking the beta from Bloomberg we also derived beta using the pure play approach. We identified General Mills, Kraft Heinz, and Conagra as Campbells' top competitors. Then we unlevered each of their beta, averaged them and relevered this beta using Campbells' capital structure. By equally weighting Bloomberg's estimate of beta and the pure play approach, we found a beta of 0.813. Putting everything together, CAPM gave us a cost of equity of 6.476%.

The last method we used to calculate the cost of equity was the "own bond yield plus judgmental risk premium" method. With this technique we took Campbells' bond yield of 3.762% and added a risk premium of 3% to come up with a cost of equity of 6.762%. Typically a market risk premium projection ranges from 3% to 8% and we picked 3% due to the nature of Campbells' business being essential. Please view the table below to reference the inputs and outputs of our three ways of estimating cost of equity.

[1] Nasdaq

[2] Yahoo

[3] Bloomberg

2018					
Dividend Growth Model: Re = $D_1/P_0 + g$		**Capital Asset Pricing Model: Re = Rf + Beta x (Rm-Rf)**		**Own-Bond-Yield-Plus-Judgmental-Risk-Premium Method**	
D_1	$0.35	Rf	2.739%	Rd	3.762%
P_0	$42.81	Beta	0.813	Judgmental Risk Premium	3%
g	2.375%	Rm	7.335%		
Re	**3.193%**	**Re**	**6.476%**	**Re**	**6.762%**
Average of Cost of Equity			**5.477%**		

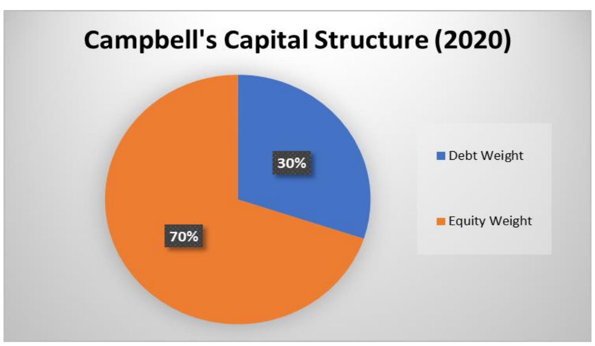
Now that we have our weights of debt and equity and the after-tax costs of debt and equity, we can estimate Campbells' cost of capital. The cost of capital calculation is shown below:

$$\text{WACC} = [43.57\% \text{ x } 3.60\%] + [56.43\% \text{ x } 5.477\%]$$

2018 WACC = 4.66%

COVID-19 PANDEMIC (2020)

To calculate the WACC for 2020 market values of debt and equity were used. To find the weight of debt we added short term and long term, we then divided this number by total debt plus market capitalization. In doing this we found the weight of debt to be 30.10%. To find the weight of equity we divided total equity by the total of total liabilities and total equity. In doing this we found a weight of 69.90%. See chart below.



2020	Market Value or Book Value (in million)	Weight
Debt	$6,447.00	30.10%
Equity	$14,971.14	69.90%
Total	**$21,418.14**	

To calculate the WACC we also need to find the after tax cost of debt. To find this we referenced Bloomberg. Because of the fed slashing rates due to the covid 19 pandemic the cost of debt is extremely low at a half of a percent.

Lastly in the WACC calculation we need to find the cost of equity, to do this we took an average of 3 methods. The capital asset pricing model (CAPM), the dividend growth model and the Own-Bond-Yield-Plus-Judgmental-Risk-Premium Method.

Using the CAPM we found a cost of equity of 5.88%. A rate of 0.53% was used for the risk free rate, return on the market was 8.71% and we used an average beta of 0.654. This average was arrived at by using numbers found in Bloomberg and the number we arrived at using the pure play approach.

The second method used to find the cost of equity was the dividend growth model. Below is the same equation mentioned above.

$$R_e = \frac{D_1}{P_0} + g$$

The dividend in 2021 was .37 cents, the price on April 1st was $46.96.[4] To find the growth rate we used an average of analysts' estimates of 1.75% and our own estimate of what we believe the growth rate should be. Our estimate of g was 3.5%, the estimated growth rate of GDP was negative, but because Campbells' revenues saw an increase during the pandemic we believe we needed to be higher than GDP by a decent amount. By taking an average of these we arrived at a growth rate of 2.625%. With these inputs the cost of equity according to the dividend growth model was 3.41%.

The last method used was the own bond yield plus judgmental risk premium method. Using this method we take Campbells bond yield of 0.6599% and add 3% to it to get 3.6599% as the cost of equity using this method. The 3% is what we judge the additional risk to be, Campbell's has very steady cash flows and is in an essential industry that has a historically low beta. When adding the additional risk 3%-5% is usually added, but because of the safety of the business we chose the lower end.

The table below shows inputs and outputs for the different ways we calculated cost of equity.

2020					
Dividend Growth Model: Re = D_1/P_0 + g		**Capital Asset Pricing Model: Re = Rf + Beta x (Rm-Rf)**		**Own-Bond-Yield-Plus-Judgmental-Risk-Premium Method**	
D_1	$0.37	Rf	0.530%	Rd	0.660%
P_0	$46.96	Beta	0.654	Judgmental Risk Premium	3%
g	2.625%	Rm	8.710%		
Re	**3.413%**	**Re**	**5.880%**	**Re**	**3.660%**
Average of Cost of Equity			**4.318%**		

With all the components of the WACC formula we are now able to calculate the WACC for 2020. The calculation is shown below.

WACC = [4.32% x 69.90%] + [30.10% x .50%]

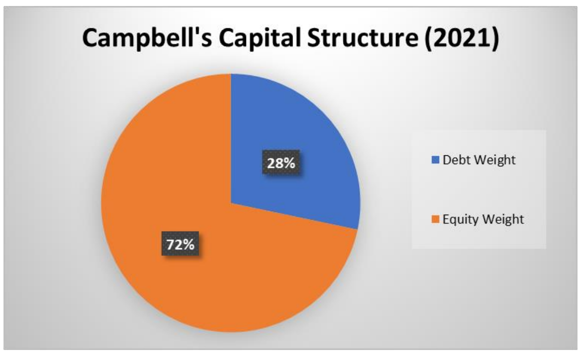
<u>2020 WACC = 3.17%</u>

[4] Nasdaq

POST COVID-19 PANDEMIC (2021)

To determine the WACC of Campbell's Soup after the COVID-19, we will need to figure out several elements such as the weights for debt and equity, the cost of debt, and the cost of equity.

Firstly, to compute the weights, we will need to know the market value of the company in 2022. To begin, the market value of debt in 2022 represented $521 million of the short debt plus $4,739 million of the long debt, which equals to $5,260 million. Moreover, the market value of equity of Campbell's Soup was $13,354.4 million in 2022. Then, we could obtain the total market value of the firm by adding the market value of debt and equity. Thus, we get a total of $18,614.4 million in 2022. Now, with this information, we could set the weight. The weight of debt will be the market value of debt divided by the total market value which gives us a weight of debt of 28.26%. The calculation of the weight of equity is 71.74% which is the market value of equity divided by the total market value.



2021	Market Value or Book Value (in million)	Weights
Debt	$5,260.00	28.26%
Equity	$13,354.40	71.74%
Total	**$18,614.40**	

Secondly, we have to determine the cost of equity of Campbells' Soup in 2022. As we can see in the table below, we used three different methods to get that and at the end we did the average of the three of them to obtain our final cost of equity that we are going to use for the WACC.

The first method is the dividend growth model which is a valuation model that determines the fair value of a stock by assuming that dividends grow at a constant rate in perpetuity or at a variable rate over the period under consideration. The formula is the following:

$$\square_{\square} = \frac{\square_1}{\square_0} + \square$$

According to the Nasdaq website, Campbell's projected dividend for next period is $0.37 and its price is $44.39.[5] To determine the growth rate for 2022, we did the average of the analyst estimation of 1.75% plus the 3% of GDP. It gives us a growth rate of 2.375%. By applying the formula, our dividend growth model for Campbell's Soup in 2022 is equal to 3.209%.

[5] Nasdaq

The second technique is the capital asset pricing model, also known as CAPM, which describes the link between systematic risk and expected return for assets, specifically stocks. CAPM is commonly used in finance to price risky securities and calculate projected returns on assets based on risk and cost of capital. CAPM's formula is the following:

$$\square_{\square} = \square_{\square} + \square(\square_{\square} - \square_{\square})$$

According to Bloomberg, we get Campbells' data for 2022. The risk-free rate of the company in this period is 2.459% and the market of return of the firm is 9.33%. Then, for beta we used the average of the 5 years adjusted beta from Bloomberg with 0.401 and beta levered with the pure play approach.

Concerning the pure play approach, we chose three Campbell's competitors such as General Mills, Kraft Heinz, and Conagra. The first step will be to unlever the beta of each competitors by following the formula below:

$$\beta_{\square} = \frac{\beta_{\square}}{(1 + (1 - \square) * (\square / \square))}$$

For General Mills, by applying the formula with a levered beta of 0.48, a debt-to-equity ratio of 0.341, and tax of 22.02%, the unlevered beta for this company is 0.379. For Kraft Heinz, with a levered beta of 0.79, a debt-to-equity ratio of 0.520, and tax of 40.05%, the unlevered beta for this firm is 0.602. For Conagra, with a levered beta of 0.64, a debt-to-equity ratio of 0.504, and tax of 13.74%, the unlevered beta for this firm is 0.446. All of the inputs were found in Bloomberg. Hence, the average for the unlevered beta is 0.476. Now, to determine Campbell's leverage beta, we should apply the following formula:

$$\beta_{\square} = \beta_{\square} * (1 + (1 - \square) * (\square / \square))$$

With the tax of 24.55% in 2022, the average beta of 0.476, the weight of debt is 28.26%, and the weight of equity is 71.74%, we have a leverage beta of 0.617. Thus, Campbell's beta is the average of the leverage beta we found, and the 5 years adjusted beta from Bloomberg with 0.401 which gives us an average of 0.509. Now, we get all the information needed to compute the CAPM formula. So, we obtain a cost of equity of 5.959% with this model.

The third method is simply the own-bond-yield-plus-judgmental-risk-premium method. With 3.749% of Campbell's cost of debt in 2022 from Bloomberg plus 3% of judgmental risk premium, we have a cost of equity of 6.749%.

Finally, after obtaining the three costs of equities, we are able to compute the average which is 5.305%.

2021					
Dividend Growth Model: $Re = D_1/P_0 + g$		Capital Asset Pricing Model: Re = Rf + Beta x (Rm-Rf)		Own-Bond-Yield-Plus-Judgmental-Risk-Premium Method	
D_1	\$0.37	Rf	2.459%	Rd	3.749%
P_0	\$44.39	Beta	0.509	Judgmental Risk Premium	3%
g	2.375%	Rm	9.330%		
Re	**3.209%**	**Re**	**5.958%**	**Re**	**6.749%**
Average of Cost of Equity			**5.305%**		

We can now compute the WACC for 2022 using all of the components of the WACC formula. The results of the computation are presented below:

$$\text{WACC} = [1.3\% \text{ x } 28.3\%] + [5.311\% \text{ x } 71.7\%]$$

$$\underline{\textbf{2022 WACC} = \textbf{4.176\%}}$$

CONCLUSION

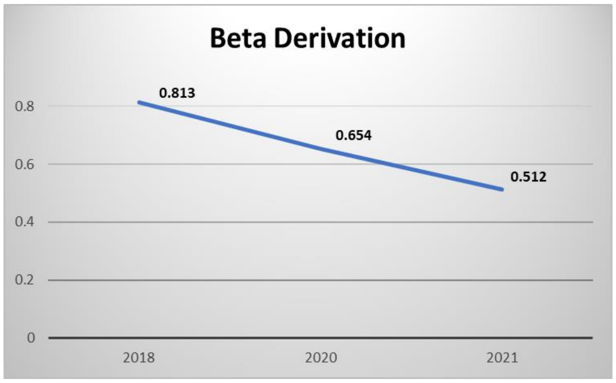
In our research we compared pre-covid 2018, covid 2020 and post-covid 2021. We concluded that the lowest cost of capital for Campbell's Soup was in 2020. One of the reasons for this include the low cost of debt in 2020, because the Federal Reserve lowered the federal funds rate to nearly zero. Campbells' was able to borrow at a rate of a half of a percent, just a fraction of what the borrowing rate was in previous years and future years.

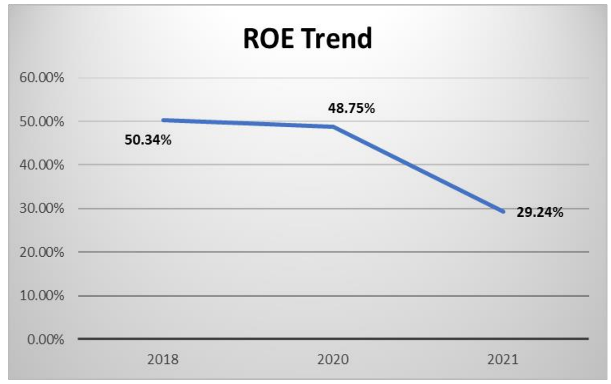
Concerning beta, the graph illustrates a decrease over the time from 0.813 in 2018 to 0.512 in 2021. Then, regarding the ROE, we did the following computation by using Bloomberg's data:

□□□ = □□ × □□□ × □□

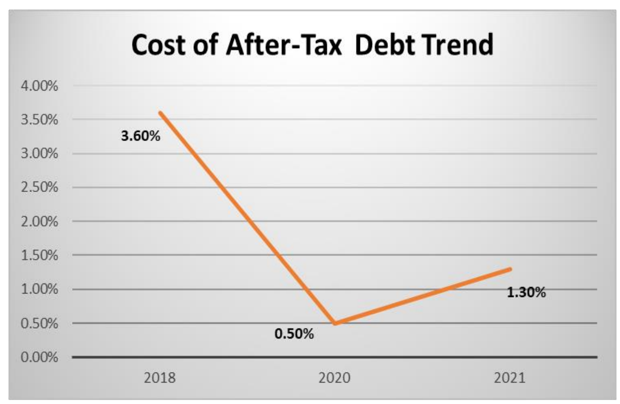
	2018	2020	2021
Profit Margin (%)	11.5%	10.3%	9.9%
Total Asset Turnover	0.59	0.68	0.7
Equity Multiplier	7.42	6.96	4.22
Return on Equity	50.34%	48.75%	29.24%

Hence, it is the same thing for the ROE trend, this ratio falls from 50.34% in 2018 to 29.24% in 2021.





Our main argument as to why the WACC was lower in 2020 is shown in the average cost of equity derived by the three different methods and the cost of after-tax debt. Concerning the cost of equity trend, the graph shows that the cost of equity went down from 5.48% in 2018 to 4.32% in 2020 and went up to 5.31% in 2021. Regarding the cost of after-tax debt, the graph indicates a decrease from 3.60% in 2018 to 0.50% in 2020 and then increased to 1.30% in 2021. Hence, these two ratios reveal the same trend as the WACC's graph.



RECOMMENDATIONS

By deriving and dissecting a company's cost of capital, as analysts we are able to view many more aspects to Campbells' than just their WACC. For instance, capital structure plays a pivotal role in the making of a company's overall cost of capital. Capital structure is the first issue that we have advice pertaining to. While Campbells' have a low WACC to begin with, this can still be improved and that starts with capital structure. As we see over the years 2018, 2020, and 2021, the federal funds rate ranged from just under 2.50% in 2018, to roughly 25 basis points in 2020 and into 2021. Intuitively one would think that during low interest rate environments, a company would use debt financing over equity. However, Campbells' actually increased their equity from 56.43% in 2018 all the way to 71.74% in 2021. Not only is debt advantageously cheap during times of low interest rates, it is also higher on the "Pecking Order" which states the cheapest financing is in the following order: internal financing, debt financing, and lastly equity financing. With this considered, we would recommend that Campbells' looks to take advantage of low interest rate environments in the future.

Now that we are entering times of quantitative tightening, Campbells' capital structure may be in fact favorable, as they have substantially decreased debt to lower levels. When looking to the future, during the next period of quantitative easing, we would recommend Campbells' look to implement a share repurchase program. In order to purchase these shares at a premium, Campbells' should take on the debt equivalent of the cash needed to make the purchase. This will effectively lower equity levels by taking shares out of the market, while simultaneously increasing debt levels. Share repurchase programs generally increase public sentiment around companies as this shows strong belief internally in the operations and long-term growth prospects.

REFERENCES

Bloomberg.com. Bloomberg. Accessed April 6, 2022. https://www.bloomberg.com/professional/solution/bloomberg-terminal/.

"Campbell Soup Company (CPB) Analyst Ratings, Estimates & Forecasts." Yahoo! Finance. Yahoo!April 6, 2022. https://finance.yahoo.com/quote/CPB/analysis/.

"Market Activity." Nasdaq. Accessed April 6, 2022. https://www.nasdaq.com/market-activity/stocks/cpb/real-time?random=621f6c1b4b785.

HAPPINESS IN THE WORKPLACE: A REVIEW OF BEST HR PRACTICES AND RECOMMENDATIONS

Austin Sicko, Siena College
Angelina Bonacquisti, Siena College
Matthew Donovan, Siena College
Deborah Kelly, JD, Siena College

ABSTRACT

Now more than ever, employees seem to be seeking, demanding, and expecting actual happiness in their careers, in the workplace, and in their lives. Throughout much of recent history, experts have explored and studied related topics, such as: work-life balance, motivation theories, self-actualization and job enrichment. Within the past few years employee happiness has become an increasingly significant metric in many American companies. The authors conducted research to ascertain whether there has been an actual shift towards employees seeking happiness, or whether this is just a new name for an old concept. Recent studies show that, in the 21st century, Americans have been progressively more likely to leave their jobs in search of more fulfilling ones. This means that businesses that do not hold their working conditions to high standards will remain at risk for high employee turnover. There are several factors that affect a worker's happiness, but a self-declared happy employee is typically substantially more productive and successful than one who is unhappy. The findings led to recommended strategies for employers aiming to ensure their employees' happiness and job satisfaction. Companies who want to stay competitive, and attract and retain high potential employees, should heed these suggestions to help employees find the happiness they are seeking.

INTRODUCTION

Turn of the century America was not kind to its working people. The working conditions for most were, at times, unbearable. However, with the influx of immigrants, labor competition was high and there were not many other choices. Many worked long hours, had no benefits, breaks were unheard of, and the salaries were minimal. Their bosses could freely do whatever they wanted because there was no overseeing organization to tell them how to run their businesses ethically. Frederick Winslow Taylor came to change this mentality. After working various apprenticeships and jobs, Taylor wrote the *Principles of Scientific Management*. His theories concluded that jobs, when implemented scientifically, carefully and separately, can be carried out efficiently. Taylor also noted that managers need to communicate well with their workers to ensure that work is carried out correctly ("Frederick Winslow"). A man named Henry Ford, most famous for the automobiles named after him, was concerned with producing things quicker and more cheaply in search of a competitive advantage. Ford famously employed the use of assembly lines. At the time, assembly lines were revolutionary and quickly became popular in many factories. They helped specify jobs for each worker. Individuals were only completing a small part of the total manufacturing process, which seemed simple but required lots of attention to detail

(Rae and Binder, 2020). People started to become hopeful and excited that they were a part of a new, more advanced society.

The United States in the years following the Second World War was filled with overwhelming amounts of confidence and happiness. There was a significant increase in the number of women in the workforce who aided in wartime efforts (Barrow, 2012). While men had been fighting in the war, women took on nursing jobs and domestic positions in factories and offices. After the war, men and women had returned home to resume their lives with their families and work. In general, people were happy to go to work if it meant they were helping to improve America. This mentality changed as time went on.

Shortly following the Civil Rights Act of 1964, a psychologist and management professor at the University of Utah, Fredrick Herzberg, coined the term “job enrichment” which became an important part of business vocabulary. According to Paul et al. (2014), job enrichment helps to ascertain the most important objectives in a company and achieve them by enforcing them amongst various divisions and personnel. After the Vietnam War and in the middle of the Cold War came an era widely known for big hair and white-collar workers, the 1980s. Throughout the decade the workforce grew exponentially. Manual labor jobs dramatically decreased and corporate jobs did the opposite. Many people began working in offices in fields such as finance, health services, and retail (Plunkert). The rise in office jobs created new issues to deal with. Employers began to scrutinize employee happiness as stress and anxiety started to show its face in the workplace. This became a focus for leaders and those in human resources because it was affecting not just the employees’ lives, but their work as well (Morgan, 2020).

More than two decades into the 21st century, the happiness of individuals continues to be an issue that concerns human resources departments. It is one of their most important responsibilities and the circumstances are constantly changing. Many companies try to maintain a mutual relationship between morale and efficiency amongst their employees to ensure that not only are they happy in the workplace, but they also produce satisfactory work. In recent years, American society has witnessed a substantial shift in mental health and how it has affected employee mentality in the workplace. However, researchers Mousa and Samara (2022) suggest that employees who perceive their job as more valuable are likely to deal with work-related stress and anxiety more competently.

CHANGING EXPECTATIONS OF PROFESSIONALS IN THE WORKPLACE

At large, “happiness” has not been a popular metric in the history of human resources. Terms such as self-actualization, job enrichment, and work-life balance are much more common but do not directly denote the happiness of individuals in the workforce. In Maslow’s hierarchy of needs, self-actualization is the highest, ultimate need. Self-actualization describes the realization of and ability to fulfill one’s creative and intellectual potential. In the workplace, employers may assist their employees in attaining self-actualization by fostering a motivating yet accepting and rewarding environment. Managers who wish to see their employees become self-actualized should try to align individuals’ unique sets of strengths and weaknesses with appropriate opportunities and challenges (Indeed Editorial Team, 2022).

According to the Society for Human Resource Management, or SHRM (2021), job enrichment is “the practice of increasing the amount of control, responsibility and discretion in an employee’s job in an effort to improve employee engagement or satisfaction.” In other words, job enrichment aims to make employees feel more valuable to their organization by assigning them additional duties and recognizing them for commendable work. Job enrichment is closely related to happiness; it is a method to invigorate and reward employees. It is not a structured or foolproof process for increasing happiness in that every employee derives joy from their jobs in different ways and managers have varying abilities to delegate responsibilities to their workers.

Work-life balance denotes the portion of an employee's time spent at their job versus at home, with family. It is frequently brought up in discussions concerning reducing stress in the workplace. In recent decades, workers in the United States have generally become more demanding of favorable working conditions. A survey conducted by The Conference Board (with a sample size of greater than 1,200) found that 24% of individuals who voluntarily quit their jobs during the COVID-19 pandemic "did so for the ability to work from home/anywhere" (Puello, 2021). It's clear that individuals in the labor force are prioritizing their time at home now more than ever.

Effective managers have a few common traits that help them lead proficiently. Of course, they need to understand the position, mission, and vision of their organization. However, in recent years, fostering emotional intelligence has gained emphasis. Emotional intelligence is "the ability to identify and manage one's own emotions, as well as the emotions of others" (Psychology Today Staff, 2022). As reported by Ellis (2022), top business schools in the United States, including Harvard and Yale, now offer classes that teach the "softer skills" that are useful in management; business students learn how to read the emotions and boost the morale of their team, as well as promote happiness in the workplace. Exhibit 1 (on the following page) displays various courses related to happiness offered by North American colleges.

Leadership and Happiness is a course offered at Harvard Business School (See Exhibit 1 and Appendix, Document 2). It teaches its students the importance of their own happiness as well as the happiness of those around them, especially in the workplace ("Leadership," 2021). By taking this class, taught by senior fellow Arthur Brooks, students will be able to discover their own aspirations including happiness, strengths, weaknesses and what they find helpful for motivation. Furthermore, students will develop plans to help others find ways of improving their happiness in life and in possible workplace positions. After leaving this class, students will have enough knowledge to lead a happy and efficient life for themselves and also prepare them for life at their future jobs.

The Greater Good Science Center at the University of California, Berkeley offers a course called Mindfulness and Resilience to Stress at Work (See Exhibit 1 and Appendix, Document 3). This course is taught by Dacher Keltner and Emiliana Simon-Thomas. In this course, students are taught to be aware of their emotions, properly recognize stress, and to understand both healthy and unhealthy forms of stress in the workplace. Additionally, students are instructed on how to build a healthy resistance to stress. Many case studies are brought into the course to demonstrate to students the prevalence and importance of stress and ways of dealing with it ("Mindfulness," 2022).

Examples of College Courses Related to Happiness

Institution	Course(s)
Harvard Business School	Leadership and Happiness
	Managing Happiness
Stanford University Graduate Business School	OB 374: Interpersonal Dynamics
Yale University	MGT 538: Mastering Influence and Persuasion
	PSYC 157: Psychology and the Good Life
FIU College of Business	MAN 3100: Happiness at Work
The Greater Good Science Center at the University of California, Berkeley	The Foundations of Happiness at Work
	Mindfulness and Resilience to Stress at Work
	Empathy and Emotional Intelligence at Work
University of Southern California Marshall School of Business	MKT 499: Happiness and Wellbeing in the Marketplace
University of Toronto	Mind Control: Managing Your Mental Health During COVID-19

Exhibit 1

Below is Exhibit 2, a line chart, which graphs the aggregate job satisfaction in the United States from 2000 to 2020. The data used to make the chart was sourced from The Conference Board's annual nationwide surveys. The Conference Board distributes and collects monthly mail surveys in partnership with Nielsen Company, recording 23 factors of American workers' job satisfaction in addition to overall job satisfaction.

The chart shows that about half of American workers were satisfied with their jobs around the beginning of the 21st century. There was a major decrease in job satisfaction from 2008 to 2010 (about a 6% drop). The Financial Crisis of 2008 is likely the root cause of this dramatic change. During the Great Recession that followed, employers across the nation had to make layoffs and desperately save capital. Those who kept their jobs often took on more work to make up for their less lucky counterparts and commonly felt underpaid or without proper benefits. As the effects of the Financial Crisis subsided, job satisfaction began to rise again. According to The Conference Board, American workers have become more satisfied with their jobs every year since 2010, despite the COVID-19 pandemic. The gradual climb in job satisfaction since the Great Recession came from incremental increases in factors like pension and retirement plans, job security, and wages. Additionally, workers took advantage of the ever-increasing job mobility in the United States; countless people voluntarily left their jobs for more gratifying positions. Albeit these factors dipped during the pandemic, organizations' administrators all over the country prioritized the well-being of their employees more than ever and many workers' schedules became more flexible. Interestingly, workers below the age of 35 experienced a decline in job satisfaction, while the 55 and over age group offset that decline in a positive direction. This is likely because younger workers have less experience and are more often subjected to layoffs. Also, senior employees presumably enjoyed their jobs' health benefits more commonly than their younger coworkers during the pandemic.

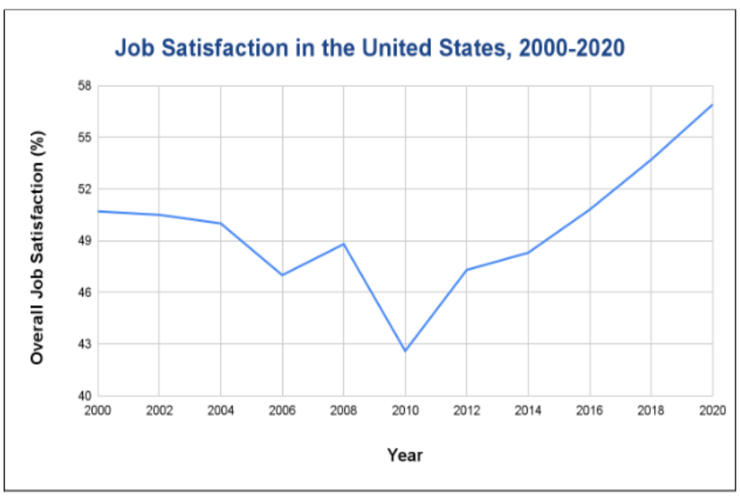


Exhibit 2

A study administered in 2010 found that individuals' incomes are closely linked to their happiness. The research led to the conclusion that after $75,000, people's happiness increased negligibly with greater yearly incomes. A more recent study conducted by Matthew Killingsworth disproved this verdict, though. In 2020 and 2021, Killingsworth collected data from more than 33,000 individuals concerning their day-to-day emotions and "found that all forms of well-being continued rising with income, not seeing any sort of inflection point where money stops mattering" (Berger, 2021).

Exhibit 3 shows this relationship and was sourced from Killingsworth's 2021 publication in the journal *Proceedings of the National Academy of Sciences* (Killingsworth, 2021). Notably, though, Killingsworth concluded that people who directly associate money with happiness are normally not as happy as others.

The graph includes a vertical dotted line representing household income of $75,000 which was the maximum level at which happiness was thought to increase significantly in the conclusion of the study from 2010. The participants of the more recent study reported having increasing positive feelings and decreasing negative feelings on a daily basis as their salaries increased.

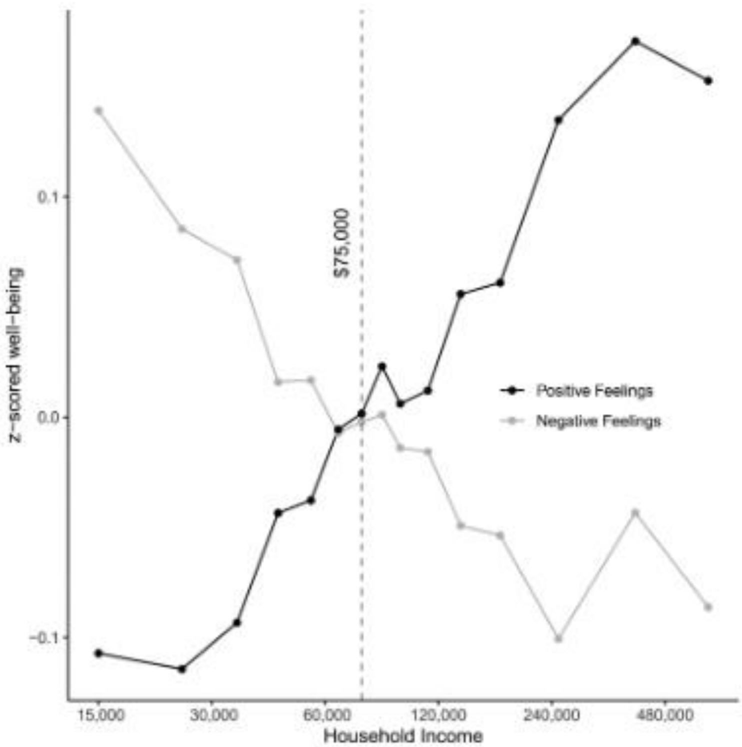


Exhibit 3

The following graphic (Exhibit 4) displays several ways in which the performance of a company can benefit from having happy employees ("How to Increase," 2022). Data for this graphic was gathered from Harvard Business Review, University of Warwick, Forbes, and other reputable sources.

Clearly, it is beneficial for businesses to prioritize the happiness of their employees. Workers who consider themselves happy tend to be more productive and efficient in many aspects. They are typically more successful in making sales. Furthermore, happier workers change professions less often, meaning that turnover expenses are lower for businesses with happy employees. In short, the happiness of employees largely contributes to the prosperity of their respective organizations.

Exhibit 4

CORRELATION BETWEEN ORGANIZATION SIZE AND HAPPINESS

In 2018, American insurance company Aflac conducted a survey of about 1,000 small business employees within the country. Every individual surveyed had worked at their respective small business for greater than or equal to one year (“Small-Business,” 2019).

The left side of Exhibit 5 (on the following page) displays that, in Aflac’s survey, nearly 91% of small business employees deemed happiness as somewhat or very important in a company. Additionally, small business employees typically viewed their work situations as less stressful than those of a large business, as seen on the right half of Exhibit 5. Over half of those surveyed (65%) agreed that their place of work was very much or somewhat less stressful.

Employee happiness is becoming a top priority within many American organizations due to the increase of potential benefits nationwide, stemming from employers’ motivation to recruit and retain a fulfilled and enthusiastic workforce (Fortune Staff, 2021a). Within a study done by Great Place to Work, which “surveyed over half a million employees on issues including how trustworthy, caring, and fair the company is in times of crises,” organizations were observed on their senior leadership teams’ responses to the changing society that emerged during the COVID-19 pandemic (Erb, 2021). As the entire world was affected by this pandemic the “100 Best Companies to Work For” rankings were published on Fortune.com. It lists the leading organizations that became “role models” to others in a time when doing good for employees was overlooked by many. Below, in Exhibit 6, is a listing of the leading organizations within the “100 Best” rankings as well as their corresponding Fortune 500 rankings and total employee counts.

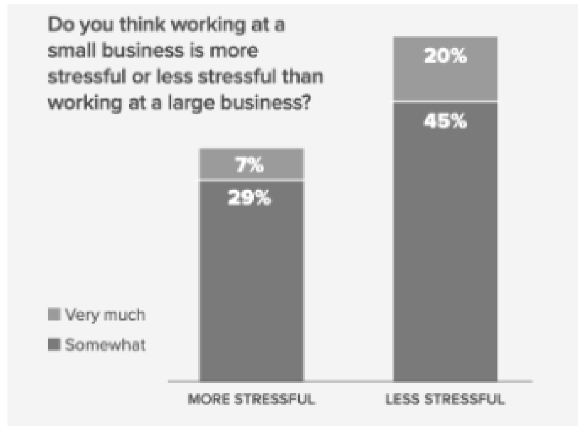


Exhibit 5

Fortune 100 Best Companies to Work For, 2021				
Business Name	**Ranking**	**CEO**	**Employee Count**	**Fortune 500 Ranking**
Cisco Systems	1	Chuck Robbins	79,500	63
Salesforce	2	Marc Benioff	69,350	137
Hilton Worldwide Holdings	3	Christopher Nassetta	141,000	-
Wegmans Food Markets	4	Colleen Wegman	52,000	-
Rocket Companies	5	Jay Farner	24,000	194
UKG	6	Aron Ain	13,000	-
Texas Health Resources	7	Barclay Berdan	22,005	-
Camden Property Trust	8	Richard Campo	1,663	-
Capital One Financial	9	Richard Fairbank	50,800	99
American Express	10	Stephen Squeri	63,700	83

Exhibit 6

The rankings listed within the survey are “weighted 40%...on how each company stepped up to support their people and communities…and 60% on employees’ confidential survey responses” (Fortune Staff, 2021b). This is important because it demonstrates that employee happiness was taken into great consideration throughout the determination of how each of these organizations were ranked overall within the list. Ranked first with over 79,000 employees, Cisco Systems has been consistently ranked as a leading organization that emphasizes a focus on employee happiness. Luckily for them, this does not occur at the expense of their financial success.

As Cisco Systems is also ranked 63rd on the Fortune 500, it is crucial to recognize that employee happiness and business successes are not mutually exclusive. Within another study completed by Great Place to Work, in which researchers “surveyed over 14,000 workers across 37 countries to determine the average employee experience around the world," it was discovered that 57% of employees within the United States workforce agree that the place in which they work is a great place (Erb, 2021; "Publix," 2021). Comparatively, at Cisco Systems, their employee satisfaction within the workplace was 96% – greater than the national average by 39% – as illustrated within Exhibit 7.

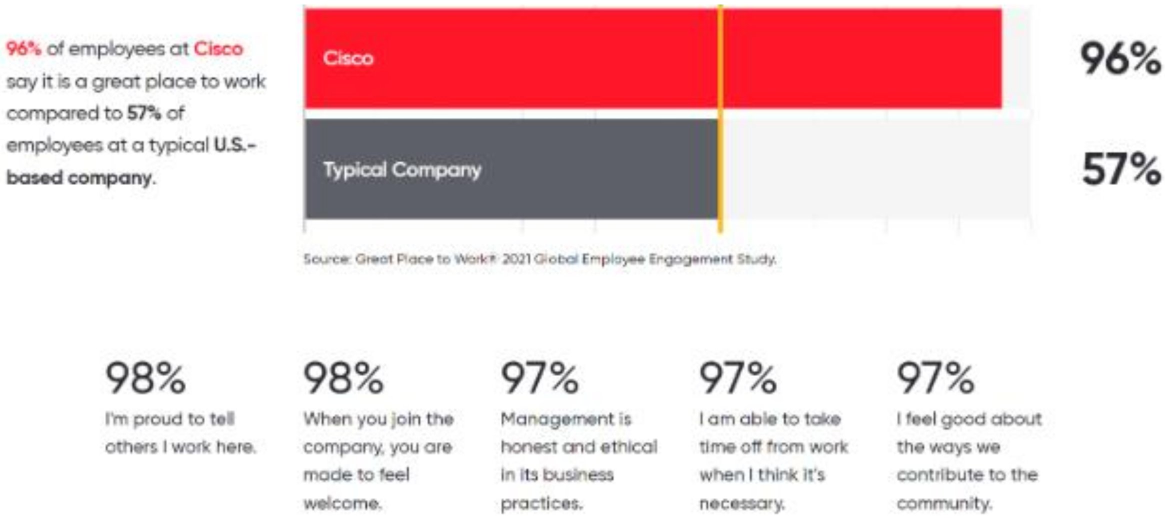


Exhibit 7

Also highlighted within Exhibit 7 is how employees feel about important aspects of their workplace such as how ethical their management teams are and how they feel their work affects their communities.

Some may ask how an organization of this size can provide a great workplace for their employees while having great economic success? For Cisco, it comes down to a three step accord made between the organization and its employees titled the "People Deal." As stated by Senior Contributor to Forbes Patrick Moorhead, the steps of this deal include, "First, Connect Everything…Second, Innovate Everywhere… third…Benefit Everyone" (2018). To "connect everything", it is stated that "Cisco commits to connecting its employees with personnel, information, and opportunities, while it asks employees to connect with their peers to deliver positive outcomes that align with the company's goals and customer needs" (Moorhead, 2018). Developing a theme of teamwork and collaboration to work towards organizational goals while also providing tools for employees to succeed is an important way in which Cisco simultaneously benefits their employees and the entire organization by its fulfillment of goals.

"Innovate everywhere" is again another goal of the "People Deal" within Cisco's organizational structure. It was further stated by Moorhead (2018) that "Cisco commits to providing an 'open and agile' environment that encourages employees to explore ideas and challenge norms while asking in return that employees 'relentlessly pursue' innovation to create a better future." As Cisco is promoting an environment in which ideas can easily be expressed and tested, employees are encouraged to think outside of the box. This idea of open expression and communication is another valuable aspect of the organization's culture that leads to happiness as well as financial gains. Lastly, the idea of "benefiting everyone" is a value deeply rooted in Cisco's organizational culture. It was further stated by Moorhead that "Cisco promises to support employee development, appreciate individuals' contributions, and positively impact the world with the company's collective ability. In turn, Cisco expects its employees to live and embody the company's global values and believe in its collective ability to 'win together'" (2018). As Cisco works diligently to provide a great environment for the betterment of each of its employees, it creates a community that is fostered to develop individuals that are proud of the work they do.

By clearly defining the relationship and responsibilities of Cisco's organization to its employees, the company develops an environment where communication is encouraged and successes maximized. With the implementation of clear objectives directly related to the further development of their employees, Cisco has diligently created an organizational culture that aligns with its goals, further proving that larger organizations are able to possess a profitable business without sacrificing a workplace where employee happiness is prioritized.

RECOMMENDATIONS FOR HUMAN RESOURCES DEPARTMENTS

There are many different practices used by companies to boost happiness in the workplace. The size of each organization influences how effective each method is. Derived from the research in previous sections, suggested practices for companies aiming to boost and/or maintain employee happiness are listed below:

- Flexible benefits plans (child care, tuition assistance, gym memberships, etc.)
- Performance management systems (measuring performance in a more sensitive way)
- Hybrid telecommuting/working from home, job sharing, contract work
- Options for personal time off or sabbaticals
- Actual office work environment layout (e.g., private offices)
- Amenities in the workplace (yoga, meditation rooms, food, etc.)
- Compressed work weeks (9/80; 3-day weekends)
- Organizing events for colleagues to mingle/develop relationships outside the workplace
- Giving praise and recognition to those whose who put in extraordinary effort
- Competitive salaries
- Clear understanding of organizational objectives

Culture and values, followed by senior leadership within the workplace is extremely valued within many organizations (See Appendix, Document 1). With the implementation of a strong leadership team that incorporates resolute moral values and a supportive culture, employees are able to feel safe voicing their opinions which leads to great increases in happiness levels. Employees tend to feel happier when their workspace is more personable and flexible. With the developing trend of happiness courses being offered within higher-educational institutions, it is clear that workplace satisfaction is becoming a more prioritized element within the business world. It is important that human resources departments around the country are becoming more aware of these trends and are willing to evolve in order to create a workplace where all of their employees are happy.

REFERENCES

Barrow, B. (2012, February 1). Workers in the 1950s worked longer hours in tougher conditions and with less holiday - so why were they happier than we are now? *This is Money*. Retrieved from https://www.thisismoney.co.uk/money/news/article-2094769/Workers-1950s-worked-longer-hours-tougher-conditions-holiday--happier-now.html

Berger, M. (2021, January 18). Money matters to happiness—perhaps more than previously thought. *Penn Today*. Retrieved from https://penntoday.upenn.edu/news/money-matters-to-happiness-perhaps-more-than-previously-thought

Ellis, L. (2021, February 14). Harvard wants M.B.A.s to learn how to be happy at work. *The Wall Street Journal*. Retrieved from https://www.wsj.com/articles/harvard-wants-m-b-a-s-to-learn-how-to-be-happy-at-work-11644836400

Erb, M. (2021, November 8). Global employment engagement study. *Great Place to Work*. Retrieved from https://www.greatplacetowork.com/resources/blog/global-employee-engagement-benchmark-study

Fortune Staff. (2021a, April 8). 100 best companies to work for: Cisco Systems. *Fortune*. Retrieved from https://fortune.com/company/cisco-systems/best-companies/

Fortune Staff. (2021b, April 12). Methodology for 100 best companies to work for (2021). *Fortune*. Retrieved from https://fortune.com/franchise-list-page/best-companies-2021-methodology

Frederick Winslow Taylor. (2021, April 8). *British Library*. Retrieved from https://www.bl.uk/people/frederick-winslow-taylor

How to increase happiness and productivity in the workplace. (2022, January 1). *CompanyDebt*. Retrieved from https://www.companydebt.com/how-to-increase-happiness-and-productivity-in-the-workplace/

Indeed Editorial Team. (2022, February 8). Applying Maslow's hierarchy of needs in the workplace. *Indeed*. Retrieved from https://www.indeed.com/career-advice/career-development/maslows-hierarchy-of-needs

Job enrichment. (2021, July 7). *SHRM*. Retrieved from https://www.shrm.org/resourcesandtools/tools-and-samples/hr-glossary/pages/job-enrichment.aspx#:~:text=Job%20enrichment%20is%20the%20practice,improve%20employee%20engagement%20or%20satisfaction.

Killingsworth, M. (2021). Experienced well-being rises with income, even above $75,000 per year. *Proceedings of the National Academy of Sciences*, 188(4). Retrieved from https://doi.org/10.1073/pnas.2016976118

Leadership and happiness. (2021). *Harvard Business School Course Catalog*. Retrieved from https://www.hbs.edu/coursecatalog/1885.html

Mindfulness and resilience to stress at work. (2022). *Greater Good Science Center*. Retrieved from https://ggsc.berkeley.edu/what_we_do/event/mindfulness_resilience_to_stress_at_work#tab-overview

Moorhead, P. (2018, August 8). Cisco's 'people deal' exemplifies its cutting edge commitment to employees. *Forbes*. Retrieved from https://www.forbes.com/sites/patrickmoorhead/2018/08/08/ciscos-people-deal-exemplifies-its-cutting-edge-commitment-to-employees/?sh=1ce0af527ff7

Morgan, J. (2020, February 6). Are we being forced into workplace happiness? *Inc*. Retrieved from https://www.inc.com/jacob-morgan/are-we-being-forced-into-workplace-happiness.html

Mousa, M., & Samara, G. (2022, January 5). Mental health of business academics within the COVID-19 era: can meaningful work help? A qualitative study. *Employee Relations*. Retrieved from https://doi.org/10.1108/ER-04-2021-0170

Paul, W. J., Jr., Robertson, K.B., & Herzberg, F. (2014, August 1). Job enrichment pays off. *Harvard Business Review*, Retrieved from https://hbr.org/1969/03/job-enrichment-pays-off,%201

Plunkert, L.M. The 1980s: a decade of job growth and industry shifts. *Bureau of Labor Statistics*. Retrieved from https://www.bls.gov/opub/mlr/1990/article/1980s-a-decade-of-job-growth-and-industry-shifts.htm

Psychology Today Staff. (2022). Emotional intelligence. *Psychology Today*. Retrieved from https://www.psychologytoday.com/us/basics/emotional-intelligence

Publix super markets. (2021, July). *Great Place to Work*. Retrieved from https://www.greatplacetowork.com/certified-company/1000405

Puello, K. (2021, December 2). Is the office dying? Of those who quit during the pandemic, one in four did so for the flexibility to work from anywhere. *The Conference Board*. Retrieved from https://www.conference-board.org/press/Rapid-respose-Dec-21

Rae, J.B., & Binder, A.K. (2020, November 12). Ford and the assembly line. *Encyclopedia Britannica*. Retrieved from https://www.britannica.com/technology/automotive-industry/Ford-and-the-assembly-line

Small-business employees are optimistic about the future, and here's why. (2019). *Aflac*. Retrieved from https://www.aflac.com/business/resources/aflac-for-small-businesses/happiness-report/default.aspx#:~:text=Small%2Dbusiness%20employees%20are%20satisfied,that%20they%20are%20very%20unsatisfied

Stansell, A. (2019, July 11). Which workplace factors drive employee satisfaction around the world? *Glassdoor Economic Research*. Retrieved from https://www.glassdoor.com/research/employee-satisfaction-drivers/

Document 1

Leadership and Happiness

Course Number 1885

Senior Fellow Arthur Brooks
Spring; Q3; 1.5 credits
14 Sessions

Albert Schweitzer once said, "Success is not the key to happiness. Happiness is the key to success." Was he right? Sort of. According to the best research available (which we will read in this class), to be a successful leader, you need to understand happiness and manage to it—yours and others'. Unfortunately, most leaders have to learn this fact by hard experience. Furthermore, they are never exposed to the expanding science of happiness, which contains a wealth of information on how to be happier as a leader and make others happier as well.

This class has three objectives:

1. Students will create a map of their own happiness, desires, motivations, strengths, and weaknesses. In short, they will know themselves much more deeply.
2. Students will learn tactics and strategies to raise their levels of well-being and life satisfaction.
3. Students will learn how to lead others in a way that increases happiness.

Students will take the best surveys on happiness, read some of the most influential modern research on the topic, discuss the research in class, and apply their knowledge to leadership scenarios. They will leave after seven weeks prepared to use the material during the balance of their time at HBS and in the workforce. Not only will this give them a competitive advantage in the labor market; it will also help them enjoy their work and lives.

This will take place as a hybrid class if possible, subject to HBS guidelines and available classroom resources in January, 2021. But if it is entirely online instead, the material will be optimized for that environment, including asynchronous lectures and interviews that students can consume on their own schedules (and as many times as they want), and virtual discussion sessions in manageable sizes. No matter the format, this class is designed to provide a straightforward experience in which students learn a lot and enjoy the work, without undue ambiguity or stress.

Document 2

Stress, anxiety, and burnout are rampant across workplaces today: 80 percent of workers feel stress on the job, and nearly half say they need help learning how to manage it. While many organizations may assume that intense stress is unavoidable, even admirable, research suggests that too much stress is toxic to our health and performance, leading to burnout and harming the culture of organizations as a whole.

This course offers research-based strategies for building resilience to stress and fortifying our well-being in the face of challenges. It explains the biological and psychological impact of stress, helps you distinguish between harmful and helpful forms of stress at work, and provides strategies for handling stress in healthy and productive ways.

The course zeroes in on the practice of mindfulness, the moment-by-moment awareness of our thoughts, feelings, and sensations that comes without judging those thoughts and feelings as good or bad. In recent years, there has been a surge in scientific research on mindfulness, with many studies documenting the value and advantages of fostering mindfulness in workplace settings. This course covers the landscape of mindfulness science, explains why it's relevant to modern workplaces, and describes how it can be effectively folded into your workplace, drawing on case studies from several major companies that have implemented their own mindfulness programs.

The course instructors are expert faculty from UC Berkeley's Greater Good Science Center, Dacher Keltner, Ph.D., and Emiliana Simon-Thomas, Ph.D., whose earlier edX course, The Science of Happiness, has been a global phenomenon, introducing a half million students worldwide to research-based practices of mindfulness and related skills of stress reduction. In this course, they tailor their scientific insights to the needs of the modern workplace, highlighting stories of success from trailblazing organizations while also identifying challenges that workplaces may face as they try to foster mindfulness and resilience.

Document 3

The Importance of Shared Cognitions of Team Member Expertise When Building a High Performing Team

Nathan Byrne, Siena College
Dr. Erik Eddy, Siena College

ABSTRACT

Organizations are increasingly using team-based work structures to solve complex challenges and issues (Wolfson, D'Innocenzo, & Bell, 2021). Such teams require team members to have shared cognitions - a shared, accurate, and complimentary understanding of team processes - in order to enhance team performance (Tannenbaum & Salas, 2020; Valcea, Hamdani, Bradley, 2019). While there are many types of shared cognitions, the current research focused on shared cognitions of teammate knowledge and expertise while working in a team environment (Cannon-Bowers, Salas, & Converse, 1993). Using an experimental design with 20 teams collaborating on six problem-solving questions, we test hypotheses pertaining to the relationship between shared cognitions about team member expertise and team processes and team performance. We find that teams with a greater level of shared cognitions of team member expertise have enhanced team process and greater team performance than teams without shared cognitions. Recommendations are made for future research and practice.

INTRODUCTION

Teams have become an important part of organizational success. Thirty years ago, few organizations utilized a team-based structure (Villinski, 2016). Today, nearly all organizations use a form of a team-based structure to solve complex problems (Eddy, Tannenbaum, & Mathieu, 2013), as teams have been shown to be effective at solving complex problems better than individuals (Hung, 2013). Such complex problems in the workplace today exceed the cognitive capacity of any individual, thus, requiring a team with individuals bringing complementary expertise to the group (Bierhals, Schuster, Kohler, & Badke-Schaub, 2007).

With this move to team-based structures came an increase in research on how to enhance team performance. Many factors have been studied that might enhance team performance. From a review of the research, Tannenbaum and Salas (2020) have identified seven driving factors of team effectiveness: capabilities (Wolfson, D'Innocenzo, & Bell, 2021), cooperation (Wong, Tjosvold, & Liu, 2009), coordination (Wittenbaum, Vaughan, Stasser, 2002), communication (Marlow, Lacerenza, Paoletti, Burke, & Salas, 2018), cognitions (Huber & Lewis, 2010), conditions (Tabassi, Roufechaei, Abu Bakar, & Yusof, 2017), and coaching (Haug, 2011). This study focuses on the impact of the cognition driver of shared cognitions on enhanced team processes and team performance.

Shared cognitions, also known as team cognitions, are shared, accurate, and complimentary understandings a team possesses (Tannenbaum, & Salas, 2020). This term encapsulates the term shared mental model (SMM), which is a shared and accurate understanding among team members (Cannon-Bowers, Salas, & Converse, 1993), as well as transactive memory systems (TMS), which demonstrates the extent to which team members understand who knows what among the team and complementary knowledge distributed among team members (Moreland, Argote, & Krishnan, 1996). Shared cognition is not illustrative of each team member knowing the exact same concepts and knowledge. Rather, team members know who on the team possesses relevant knowledge and skills when collaborating to solve problems.

Tannenbaum and Salas (2020) identify a variety of shared cognitions that are important for team success, including the vision, purpose, and goals (Where to?), priorities (What's important?), roles of members (Who should?), tasks, norms, and interdependencies (How to?), rationale (Why to?), expertise (Who knows?), contingencies, if-then (What if?), and situation and cues (What's up?). Though these types of shared cognitions can be more important for a particular team or time, all eight types of shared cognitions can influence a team's ability to coordinate, adapt, and perform well together.

While research has been conducted on each of these eight forms of shared cognitions, one form that has received less attention in research literature is team member knowledge and expertise (the "Who knows?") (Tannenbaum & Salas, 2020). While everyone on a team is not skilled or knowledgeable in everything, each team member does possess their own areas of expertise, knowledge, strengths, and limitations. Shared cognitions describe a team that knows who to contact when the team requires a specific area of expertise. The focus of the current research is to explore the impact of shared cognitions about team member knowledge and expertise on important team-level outcomes. Specifically, this research focuses on the impact that shared cognitions about team member knowledge and expertise has on team processes and team performance. The following section provides a literature review and hypotheses related to the current study.

LITERATURE REVIEW

Research on team cognition has generally been explored through the two constructs of shared mental models (SMM) (Denzau & North, 1994) and transactive memory systems (TMS) (He & Hu, 2021). Despite progress in understanding the importance of shared cognitions in team functioning, using various conceptualizations and research strategies, there have been challenges in finding a clear pattern in such relationships given substantive and methodological differences across studies (DeChurch & Mesmer-Magnus, 2010). Additionally, there is relatively little known on how team cognition forms, and this uncertainty can cause a critical issue for formulating teams in a variety of settings such as in school, work, and athletics. Thus, this research can provide directionality into the relationship between team process and cognition, as well as attempt to explain how cognitive configurations influence team performance (DeChurch & Mesmer-Magnus, 2010).

The impact of shared cognitions has been studied by researchers illustrating its impact on several variables. The current research focuses on the outcome variables of team processes and team performance. Team process describes the nature of team member interaction, examples including goal setting and coordinating (Marks et al., 2001), and specifying the actions team members take to combine their resources and skills to achieve shared goals (Tannenbaum, & Salas, 2020). Team performance is described as team effectiveness indicated by group outputs through the linked inputs of leadership, training, and composition (Mathieu et al., 2008).

Researchers Leslie DeChurch and Jessica Mesmer-Magnus, through a meta-analysis of 65 studies examining shared cognitions, found that teams with stronger shared cognitions demonstrated stronger teamwork behavior and an increase in team performance, as shared cognitions guide the interactions of team functionality. Specifically, a positive relationship has been found between cognition and behavioral processes (DeChurch, & Mesmer-Magnus, 2010). Additionally, a study of 100 teams in a Canadian organization found team members exerted more effort when they believed their team possessed a shared understanding of tasks and goals at hand (Aubé, 2018), supporting DeChurch and Mesmer-Magnus' findings of stronger shared cognitions exemplifying enhanced teamwork behaviors and performance. Tannenbaum and Salas (2020) also point out research finding a weaker presence of shared cognitions leading to weakened team performance. Such research, conducted by Esther Sackett and John Cummings (2018) in a study of more than 300 teams in a large global company, suggest such a result can be attributed to greater centrality asymmetry in teams without shared cognitions, as centrality asymmetry is described as "the extent to which members differ in their perceptions of how central they are in the team's task interdependence network relative to how central other members see them" (p. 16). Without having shared cognitions, teams experienced conflicting perspectives on what team members they should rely on, as well as decreasing their effectiveness to seek assistance from team members. As such circumstances arise, the team process is weakened (Tannenbaum, & Salas, 2020).

Research has also shown that members of more cohesive teams value and attend to team member's informational input greater than less cohesive teams (DeChurch & Mesmer-Magnus, 2010). Furthermore, DeChurch & Mesmer-Magnus' meta-analysis found the constructs of behavioral process and motivational states show an 11.6% variance in team performance, and that number increased to 18.4% when team cognition was added to the model, illustrating a significant 6.8% change in R^2 (DeChurch & Mesmer-Magnus 2010). This study uses this concept of cohesiveness through shared cognitions of team member knowledge and expertise to influence team performance.

This research is suitable for empirical research as previously research has laid the foundation for shared mental models, providing a framework for individual task duties that influence team performance (Marks, Zacaro, & Mathieu, p. 2000). To continue further research on such variables, DeChurch & Mesmer-Magnus (2010) suggest identifying any factors that promote functional cognitive structures, with such areas of research being "ripe for empirical testing" (p. 49). This study focuses on team member knowledge and expertise from shared cognitions as a factor for such testing.

Though limited, there has been some research related to shared cognitions and team process and team performance. While most research on shared cognitions has only recognized its importance, rather than how the formation of shared cognitions occurs or why it occurs, one study focused on the dynamic processes in which individual knowledge is acquired and manifested at a team-based level (Grand, Braun, Kuljanin, Kozlowski, & Chao, 2016). Using simulations, they found that agent teams shared knowledge more effectively when team members were able to process information to a greater extent and use communication strategies that encouraged equal rates of information sharing (Grand et al., 2016). With such previous research in mind, this research study adds value to the research community by using team member expertise and discussion of expertise as a variable for promoting the sharing of knowledge. Thus, this would be able to illustrate shared knowledge on a team-based level and use a communication strategy, such as the RACI matrix (See Appendix 2), to promote the enhancement of team processes through shared cognitions of team member knowledge and expertise.

Additionally, a study of software development teams aimed to use knowledge of expertise as a socially shared cognitive process that positively influenced team processes and attributed to greater team performance. However, researchers did not find the presence of expertise to affect any dimension of performance (Faraj, & Sproull, 2000). In contrast, this research study adds value by demonstrating the presence of shared cognitions of team member expertise impacting performance. Utilizing student subjects from a variety of majors and backgrounds also provides a more representative study, rather than focusing on one industry or application. Additional research regarding shared cognitions and performance has been conducted in a limited capacity. One study found that the team member mental model was an important sub-model for effective team performance when solving complex problems (Bierhals et al., 2007). Finding such a link in SMM about team member's skills validates this research study promoting team member knowledge and expertise, to increase teams' SMM, and ultimately drive higher levels of performance.

With behavioral processes increasing team performance and shared knowledge attributing to increasing team process, we expect that the presence of shared cognitions of team member knowledge and expertise will increase team process and team performance. We expect teams with shared cognitions to have a greater team performance and team process than teams who do not possess shared cognitions. We focus on team knowledge-building through shared cognitions of team member knowledge and expertise, an area of focus that has been understudied in practice as of date.

> *Hypothesis 1:* Shared cognitions about team member knowledge and expertise will positively impact team processes.
>
> *Hypothesis 2:* Shared cognitions about team member knowledge and expertise will positively impact team performance.

METHODS

Subjects

Subjects were 60 students from a small private college in New York State with an average age of 20.3 years old (SD = 1.2). Participants were 64% male and 36% female, demographically distributed 81% White, 6% Asian, 5% Black or African American, 5% Hispanic Latino or Spanish Origin, and 1% Pacific Islander. Subjects were pursuing a wide range of majors including Management, Business, Economics, Communications, Computer Science, Finance, Marking, Mathematics, Health Studies, Accounting, Actuarial Science, Applied Physics, Biology, Physics, Political Science, Psychology, Biochemistry, Creative Arts, Nursing, Sociology, and Visual Arts and Design. The average participant GPA was approximately 3.46 on a 4.0 scale.

Experimental Design

Subjects received an email inviting them to participate in the experiment and to give informed consent. The email was sent to classmates and peers of the first author. Then, using a snowball method (Welch, 1975), participants were asked to share the survey with other student colleagues. Those that choose to 'click on the link' to participate were asked to complete a poll with times that they were available to participate in a half-hour experiment via zoom. Subjects were asked to communicate directly with the researcher to set up a different time when conflicts arose.

Sixty subjects participated in the experiment in groups of three, for a total of 20 teams. Teams were developed by the researcher based on subject availability and were randomly assigned to the control and experimental conditions, with 10 teams in each condition.

Subjects, in a team of three, joined a zoom meeting with the experimenter at their scheduled time. Once subjects joined the zoom room, the experimenter read a script to communicate the instructions during the entire experiment. Different scripts were used, one for teams in the treatment condition and one for teams in the control condition (See Appendix 1).

The central task for the teams was to answer 6 problem-solving questions (2 Math Questions, 2 Spatial Relations Questions, and 2 English Questions). Before answering the six questions, teams in the treatment condition were asked to discuss and fill out the team skills matrix (shown in Appendix 2). To formulate such a distinction between teams with and without enhanced team processes, this study uses a skills matrix, often referred to as a RACI matrix. This matrix was used for teams to discuss their skills and abilities which they were to utilize in the experiment. Such a matrix enhances team process, as it gives the opportunity for team members to build a shared understanding of who has greater expertise in certain areas and who is responsible for what during the experimental task. Such a matrix is related to establishing role clarity through SMMs (Tannenbaum & Salas, 2020). After such discussion, subjects chose which of the three team members would be the leader for each question. Note that each team member was the team leader for two of the six questions.

Teams in the control condition did not discuss or use the team skills matrix before answering the six questions. Instead, the experimenter randomly assigned a team leader for each question. It is important to note that the highlighted portion in the script shown in Appendix 1 is the only difference between the scripts (i.e., the opportunity to discuss skills/expertise). Therefore, researchers were able to isolate the impact of shared cognitions on team process and team performance in the experiment.

After the team skills discussion to decide a leader for each question (treatment condition) or after being assigned a leader for each question (control condition), team members then worked together to answer the six questions shown in Appendix 3. The team members were encouraged to work as a team. They were encouraged to work together, read the question, discuss, and debate the question, with the leader providing the team’s final answer.

After a team answered the six questions, each team member was sent a link to a google form to answer survey questions. Team members could not see each other’s survey answers, and survey answers were anonymous to the experimenter. The survey encompassed team information (team number and the control/treatment group identifier), survey information (team process, based on their experience working in their team), and demographic information (used for research purposes only) as described in greater detail above. The experiment concluded after subjects had successfully submitted their answers to the survey. Once all 60 subjects had completed the experiment, a debrief email was sent, explaining the purpose of the study, the results of the study, and answers to the six questions in the experiment (See Appendix 3).

<u>Experimental Manipulation</u>

Enhanced Shared Cognitions. The independent variable in this experiment was manipulated using the method described above. Teams in the treatment condition discussed team member skills prior to engaging in the task to enhance shared cognitions. Teams in the control condition did not discuss team member skills. A manipulation check question (“Before working on the questions, our team identified who had expertise in Math, Spatial Relations, and English”, responses on a 5 point Likert-type scale 1=strongly disagree; 5=strongly agree) found team members in the treatment condition mean response 4.48 on a 5 point scale (SD=.802), and team members in the control condition mean response 1.58 on a 5 point scale (SD=.809), thus providing support for the efficacy of this manipulation.

Measures

Team Processes. Items from Mathieu and Marks' scale (2001) of team processes behaviors that focused on transition processes were utilized. Five items were utilized to measure team processes. Example items include, "to what extent did our team actively work to identify the key challenges that we expect to face?" and "to what extent did our team actively work to develop an overall strategy to guide our team activities?". Responses were captured on a 5-point Likert-type scale (1="Not at all" and 5="To a Very Great Extent"). Cronbach Alpha's estimate of reliability = .92.

Team Performance. For each of the six questions teams answered, the experimenter captured each team's final answer. Team performance was calculated as the number of questions teams correctly answered out of the six questions.

Level of Analysis

Though team processes information was gathered at the individual level, the unit of theory in the present study was the team. That is, all the hypotheses were posited at the team level and the team process variable was aggregates of individual responses to the team level of analysis. Aggregation is justified by theoretical as well as empirical arguments (Rousseau, 1985). Team members may be expected for many reasons to share perceptions of the work. And, in the case of this study, it seems reasonable that team members will share perceptions of task readiness as an element of team process. High within-team agreement was demonstrated to justify using the team average as an indicator of a team-level variable. A value of .70 or above is suggested as enough within-group interrater agreement (James, Demaree, & Wolf, 1993). In this case, team process value was .82. Aggregation, therefore, was justified for this scale. The team effectiveness measure was captured at the team level, and, therefore, no aggregation was required.

RESULTS

There are statistically significant differences between the control group and treatment group at the multivariate level ($F(2,17)=744.75; p<.001$). This indicates that we should explore univariate differences across constructs. An examination of between-subject results demonstrates that there are statistically significant differences between the control group and treatment group on team process ($F(1,18)=9.70; p<.05$). Looking at the means, shown in Table 1, the treatment group that engaged in a RACI matrix conversation to build shared cognitions of team member expertise rated their task processes higher (mean=3.65 out of 5) than the control group that did not build shared cognitions of team member expertise (mean=3.04 out of 5).

There are also statistically significant differences between the control group and treatment group on team performance as measured by the number of problems solved correctly ($F(1,18)=2.25; p<.10$). Looking at the means, shown in Table 1, the treatment group that engaged in a RACI matrix conversation to build shared cognitions of team member expertise solved a greater number of problems on average (mean=4.00 out of 6) than the control group that did not build shared cognitions of team member expertise (mean=3.20 out of 6).

DISCUSSION

This paper contributes to research by illustrating the impact shared cognitions of team member expertise has on team processes and team performance. The results support that teams who engage in a discussion of their expertise before solving team problems demonstrate enhanced team processes and achieve a higher level of performance than teams who do not engage in such a discussion. The following sections explore implications for future research and practice.

Implications for Future Research

We recommend that future research should explore whether these findings work with employed subjects as it did with student subjects. Future research may also explore how employed subjects who have previously worked together on projects may encompass shared cognitions that could contribute to enhanced team process and performance. Such findings could give rise to an emphasis for organizations to encourage developing shared cognitions within employee teams.

One aspect of this research that has not been discussed but might be a fruitful pursuit for future research is the amount of time teams spent discussing each of the questions and the quality of that conversation. Although not an a-priori hypothesis, and therefore not reported in the results section of this paper, the current study demonstrated statistically significant differences between the control and treatment groups on engaged conversation *($F(1,49)=2.57$; $p<.10$)*. Looking at the means, we see that the treatment group that engaged in conversation to build shared cognitions of team member expertise spent more time in engaged conversation (mean=20 minutes and 19 seconds) than the control group that did not engage in conversation to build shared cognitions of team member expertise (mean=17 minutes and 48 seconds). In addition to this quantitative finding, the experimenter gathered qualitative information for each session regarding the value of the conversation. The experimenter indicated that team members in the treatment condition engaged in conversation to build shared cognitions of team member expertise engaged in higher quality conversation. Such information discussed included team members giving each other an opportunity to share their opinion and reasoning on what they thought was the best answer to the question. This orchestrated an open conversation between members. If the team was unsure about the question after discussing, they turned to the “expert” for advice to come up with their final answer. On the contrary, team members in the control condition that did not engage in team conversation to build shared cognitions of team member expertise spent less time engaged in quality conversation. The experimenter noted such teams tended to rely on the assigned “leader” for each question to figure out and come up with the solution themselves. Additionally, in the control condition, a team where one group member was more talkative than the others tended to take control of the group and answer the questions, while other group members sat in silence. It is also worth noting that the standard deviation for time engaged in quality information for the treatment condition (7 minutes and 12 seconds) was over double the standard deviation of time engaged in quality information for the control condition (2 minutes and 45 seconds). The experimenter noted that the large standard deviation for the treatment group was attributed to the high-quality team conversation. As members in the treatment conditions teams were engaged in high-quality discussions, some teams were able to come up with their final answers rather quickly. Other teams in the same treatment conditions took longer than average to answer the questions as they were engaged in such a high-quality discussion, ensuring all group members were a part of the conversation, which can be attributed to a much longer time solving each problem. On the contrary, teams in the control condition who engaged in comparably lower quality information discussions sometimes sat in moments of silence with less open conversation, attributing to longer times for answering the questions. Or, the “leader” for each question would decide on the answer without much input from group members, making the length of time to answer the questions shorter than the treatment condition. An explanation for such findings can be attributed to the RACI matrix exercise, as teams may have felt more comfortable with their teammates after discussing their strengths and weaknesses. Lencioni's model of team effectiveness (2022) suggests team members that are open and share strengths and weaknesses with teammates build trust and, therefore, will feel more comfortable discussing, debating, and challenging each other in conversation. Future research should explore these possibilities more thoroughly, especially whether enhanced trust leads to enhanced team process and greater team performance.

Lastly, with this research being conducted on an online communications platform where team members communicated on a virtual video call, we believe the findings reflect the current shift to virtual work due to the COVID-19 pandemic. Research has shown the variables of task readiness, team processes, and relationship interactions, are crucial in making adjustments to promote organizational success in the virtual environment, as such an environment is not going away and has enabled organizations to communicate more globally (Whillans, Perlow, & Turek, 2021). Incorporating the findings of this study with previous research on Enterprise Social Networks (ESN) that facilitates teamwork variables of tasks, process, and relationships can focus on the relationship of shared cognitions, team process, and performance centered around ESNs (Azaizah, Reychav, Raban, Simon, & McHaney, 2018; Saarinen, 2016). With such a landscape of organizations utilizing virtual teams on media technologies, employees' abilities to effectively communicate and share knowledge in online collaborative activities is a driving factor for organizational improvement (Azaizah, Reychav, Raban, Simon, & McHaney, 2018).

Implications for Practice

Findings from this research, that teams who engage in a conversation to build shared cognitions of team member expertise before solving team problems demonstrate enhanced team processes and achieve a higher level of performance, are important for organizations to consider. This research displays the impact that understanding co-workers' skills and abilities can have in organizational settings. As the workplace is growing more complex with performance-focused results, having high team performance is at the forefront of organizational objectives (Ibarra, 2019). Increased shared cognitions can lead to increased team performance at work, thus enhancing organizational success.

Such outcomes are also important for school settings, given the team-based structure of classrooms. A team-based structure of learning in classrooms has become predominant, compared to individual work, as teachers and professors are trying to find avenues for enhancing student engagement in their coursework (Smith, Sheppard, Johnson, & Johnson, 2005). Examples of these avenues include team projects, presentations, and case studies. The findings of this study are applicable to these avenues as they all utilize students working together in teams to solve complex problems and deliver results on such problems they come across. If students increase their shared cognitions, they can increase their team performance on such assignments.

The findings of this study may also have implications for athletic teams. Similar to organizational teams, sports teams must work together to solve complex problems to be successful in their objectives. In team sports, an individual member of the team is not responsible for all tasks for generating team performance. Rather, each team member uses their skills and abilities to produce a joint team performance. Sports teams with shared cognitions can help team members have the knowledge of teammates' strengths and tendencies, which we can expect to increase team processes and team performance.

This study examined the role shared cognitions of team member knowledge and expertise has on team processes and team performance. We captured the positive effect of having a discussion of skills and expertise to build shared cognitions in teams. It is our hope that researchers and practitioners build on this study's findings to enhance understanding of the impact shared cognition of team member expertise has on team processes and team performance in classrooms, athletics, and organizations.

REFERENCES

Aubé, C., Rousseau, V., & Tremblay, S. (2015). Perceived shared understanding in teams: The motivational effect of being "on the same page." *British Journal of Psychology*, *106*(3), 468–486. https://doi.org/10.1111/bjop.12099

Azaizah, Reychav, I., Raban, D. R., Simon, T., & McHaney, R. (2018). Impact of ESN implementation on communication and knowledge-sharing in a multi-national organization. *International Journal of Information Management*, *43*, 284–294. https://doi.org/10.1016/j.ijinfomgt.2018.08.010

Bierhals, R., Schuster, I., Kohler, P., & Badke-Schaub, P. (2007). Shared mental models—linking team cognition and performance. *CoDesign*, *3*(1), 75–94. https://doi.org/10.1080/15710880601170891

Cannon-Bowers, J. A., Salas, E., & Converse, S. A. (1993). Shared mental models in expert team decision making. In N. J. Castellan, Jr. (Ed.), *Individual and group decision making: Current issues* (pp. 221–246). Hillsdale, NJ: Erlbaum.

DeChurch, L. A., & Mesmer-Magnus, J. R. (2010). The cognitive underpinnings of effective teamwork: A meta-analysis. *Journal of Applied Psychology*, *95*(1), 32–53. https://doi.org/10.1037/a0017328.

Denzau, A. T., & North, D. C. (1994). Shared mental models: Ideologies and institutions. *Kyklos*, *47*(1), 3. https://doi.org/10.1111/j.1467-6435.1994.tb02246.x

Eddy, E. R., Tannenbaum, S. I., & Mathieu, J. E. (2013). Helping Teams to Help Themselves: Comparing two Team-Led Debriefing Methods. *Personnel Psychology*, *66*(4), 975–1008. https://doi.org/10.1111/peps.12041

Faraj, S., & Lee Sproull. (2000). Coordinating Expertise in Software Development Teams. *Management Science*, *46*(12), 1554. https://doi.org/10.1287/mnsc.46.12.1554.12072

Grand, J. A., Braun, M. T., Kuljanin, G., Kozlowski, S. W. J., & Chao, G. T. (2016). The dynamics of team cognition: A process-oriented theory of knowledge emergence in teams. *Journal of Applied Psychology*, *101*(10), 1353–1385. https://doi.org/10.1037/apl0000136.supp (Supplemental)

Haug, Mona. (2011). What is the relationship between coaching interventions and team effectiveness? *International Journal of Evidence Based Coaching & Mentoring*, 89–101.

He, H., & Hu, Y. (2021). The dynamic impacts of shared leadership and the transactive memory system on Team Performance: A Longitudinal Study. *Journal of Business Research, 130,* 14–26. https://doi.org/10.1016/j.jbusres.2021.03.007

Heavey, C., & Simsek, Z. (2017). Distributed Cognition in Top Management Teams and Organizational Ambidexterity: The Influence of Transactive Memory Systems. *Journal of Management*, *43*(3), 919–945. https://doi.org/10.1177/0149206314545652

Huber, G. P., & Lewis, K. (2010). Cross-Understanding: Implications for Group Cognition and Performance. *Academy of Management Review*, *35*(1), 6–26. https://doi.org/10.5465/amr.35.1.zok6

Hung, W. (2013). Team-based complex problem solving: a collective cognition perspective. *Educational Technology Research & Development*, *61*(3), 365–384. https://doi.org/10.1007/s11423-013-9296-3

Ibarra, P. (2019). How to Create a Performance-Driven Workforce: Managing Employee Performance is a Process, not an Event! *Public Management (00333611), 101*(6), 4–5.

Marks, M. A., Mathieu, J. E., & Zaccaro, S. J. (2001). A temporally based framework and taxonomy of team processes. *Academy of Management Review, 26,* 356–376.

Marks, M. A., Zaccaro, S. J., Mathieu, J. E., Marks, M. A., Zaccaro, S. J., & Mathieu, J. E. (2000). Performance implications of leader briefings and team-interaction training for team adaptation to novel environments. *Journal of Applied Psychology*, *85*(6), 971–986. https://doi-org.ezproxy.siena.edu/10.1037/0021-9010.85.6.971

Marlow, Lacerenza, C. N., Paoletti, J., Burke, C. S., & Salas, E. (2018). Does team communication represent a one-size-fits-all approach?: A meta-analysis of team communication and performance. Organizational Behavior and Human Decision Processes, 144, 145–170. https://doi.org/10.1016/j.obhdp.2017.08.001

Mathieu, J., Maynard, M. T., Rapp, T. L., & Gilson, L. (2008). Team effectiveness 1997–2007: A review of recent advancements and a glimpse into the future. *Journal of Management*, *34,* 410–476.

Mesmer-Magnus, J., Niler, A. A., Plummer, G., Larson, L. E., & DeChurch, L. A. (2017). The cognitive underpinnings of effective teamwork: A continuation. *Career Development International*, *22*(5), 507–519. https://doi.org/10.1108/cdi-08-2017-0140

Moreland, R. L., Argote, L., & Krishnan, R. (1996). Socially shared cognition at work: Transactive memory and group performance. In J. L. Nye & A. M. Brower (Eds.), *What's social about social cognition? Research on socially shared cognition in small groups* (pp. 57–84). Thousand Oaks, CA: Sage.

Rousseau, D. M. (1985). Issues of level in organizational research: Multi-level and cross-level perspectives. *Research in Organizational Behavior, 7,* 1–37.

Saarinen, J. (2016). Managing global virtual teams (Doctoral Dissertations). Aalto University publication series, Department of Management Studies.

Sackett, E., & Cummings, J. N. (2018). When team members perceive task interdependence differently: Exploring centrality asymmetry and team success. *Group Dynamics: Theory, Research, and Practice*, *22*(1), 16–31. https://doi.org/10.1037/gdn0000079

Smith, Sheppard, S. D., Johnson, D. W., & Johnson, R. T. (2005). Pedagogies of Engagement: Classroom-Based Practices. *Journal of Engineering Education (Washington, D.C.), 94*(1), 87–101. https://doi.org/10.1002/j.2168-9830.2005.tb00831.x

Tabassi, A. A., Roufechaei, K. M., Abu Bakar, A. H., & Yusof, N. (2017). Linking Team Condition and Team Performance: A Transformational Leadership Approach. Project Management Journal, 48(2), 22–38. https://doi.org/10.1177/875697281704800203

Tannenbaum, S. I., & Salas, E. (2020). *Teams that work: The seven drivers of Team Effectiveness*. Oxford University Press.

Valcea, Hamdani, M., & Bradley, B. (2019). Weakest Link Goal Orientations and Team Expertise: Implications for Team Performance. *Small Group Research*, *50*(3), 315–347. https://doi.org/10.1177/1046496418825302

Villinski, A. P. (2016). Collaborative overload. *Harvard Business Review*.

Welch, S. (1975). Sampling by referral in a dispersed population. The Public Opinion Quarterly, 39(2), 237-245.

Whillans, Perlow, L., & Turek, A. (2021). Experimenting during the shift to virtual team work: Learnings from how teams adapted their activities during the COVID-19 pandemic. *Information and Organization*, *31*(1), 100343–. https://doi.org/10.1016/j.infoandorg.2021.100343

Wittenbaum GM, Vaughan SI, Stasser GI. (2002). Coordination in task-performing groups. In Tindale RS (Ed.), *Theory and research on small groups* (pp.177–204). New York : Kluwer Academic

Wolfson, M. A., D'Innocenzo, L., & Bell, S. T. (2021). Dynamic team composition: A theoretical framework exploring potential and kinetic dynamism in team capabilities. *Journal of Applied Psychology*. https://doi.org/10.1037/apl0001004

Wong, A., Tjosvold, D., & Liu, C. (2009). Innovation by Teams in Shanghai, China: Cooperative Goals for Group Confidence and Persistence. *British Journal of Management*, *20*(2), 238–251. https://doi.org/10.1111/j.1467-8551.2008.00563.x

TABLE 1: DESCRIPTIVE STATISTICS				
Dependent Measure	**Experimental Group**	**Mean**	**Standard Deviation**	**N**
Team Performance	Control	3.20	1.39	10
	Treatment	4.00	.943	10
	Total	3.63	1.23	20
Team Processes	Control	3.04	.406	10
	Treatment	3.65	.460	10
	Total	3.30	.524	20

APPENDIX 1: EXPERIMENTER SCRIPT

{Participants have joined the scheduled zoom meeting and the experiment is ready to begin}

Thank you for participating in this research experiment. During the experiment we would appreciate you giving your best and honest effort. The entire experiment will be done on Zoom in one session, and the session will not be recorded. Please have your cameras on during the entire experiment. It is important to not communicate with anyone outside of the experiment or be using any other electronic devices. Please do not have any additional tabs open on your computer during the experiment unless instructed by the experimenters. However, you may use paper and pencil to help you.

I am now sending a "Welcome" message in the Zoom chat. *{Experimenter sends welcome chat}*. This will show you a chat notification on the bottom of your screen. Please click on the chat notification so a chat box is displayed. We ask you to keep this chat box open for the entire experiment because additional information will be sent through the chat that will be needed while completing the experiment.

{Participants open chat box and get guidance if they have trouble doing so}

{Experimenter then shares screen of PowerPoint with questions on it, participants can only see the Title slide}

The three of you will be asked to solve 6 questions having to do with math, spatial relations and english. You will all be working together to answer the questions, and the leader will have the final say to answer that question, by sharing their group's final answer out loud to the experimenter. Each team member can only be a "leader" for one type of question (math, spatial relations, or english). Math consists of using logic, addition, and use of fractions. Spatial relations consists of analyzing images and diagrams visually. English consists of reading comprehension and vocabulary.

Treatment Group Only

Before the questions are shown, you will discuss amongst yourselves and choose a group member to be the "leader" for each question topic (math, spatial relations, or english). To facilitate this discussion, we've built this 'team skill matrix' (show slide). Let's take a moment to rate your expertise in each of the three areas and tell your teammates why you've rated yourself that way (for example, perhaps you've taken classes in this area or have other knowledge or experience). I'll capture your ratings in the matrix on this screen.

{*Begin with the first team member. Ask that team member to rate his/herself on 'math' and share why they rated themselves that way. Then, ask the second team member to rate his/herself on 'math' and discuss why, then ask the third team member to rate his/herself on 'math' and discuss why. Once all three have rated themselves, move onto "spatial reasoning" and complete the same process. Once all three have rated themselves, move on to "english" and complete the same process. Once all ratings are complete, tell participants to use the information that was generated to decide who will be the leader for each type of question}*

Control Group Only

Before the questions are shown, the experimenter will assign a group member to be the "leader" for each question topic (math, spatial relations, or english).

I will stop sharing my screen to input your names as the leader for each question.

{Experimenter stops sharing screen, and takes a moment to enter the names of the participants on each slide they are the leader for}

{Experimenter reshares screen}

The objective is to correctly answer each question as quickly as possible. We want you to work as a team on every question - review the questions, everyone discuss and share your thoughts with each other, and everyone work together to come up with one joint answer.

When you decide on an answer, please have the leader of the question say "__ is our final answer". After I record your answer and time for that question, I will then go to the next question for you all to begin, and this process will continue for all six questions.

Before we begin, do you have any questions?

{If no questions, experimenter begins the experiment and enters leader's name in the text box on the slide for question 1}

I will now go to the next slide for question 1, and you may begin answering the question. *{When a final answer is given for a question, the experimenter will say, "Thank you for your answer. Now we will be moving on to question two, __ is the leader for this question. Please all work together to answer the question. You may begin." {Experimenter goes to next question and enters leader's name in the text box on the slide}.*

Process repeats in-between all questions

{Participants complete all 6 questions}

Thank you for answering all 6 questions. We have just a few more minutes left in the experiment. We will now be sending a link in the Zoom chat to a Google form to fill out. Please note that all form answers will be anonymous and not visible to any participants in the experiment or to the experimenters. No one will be able to identify your individual responses.

{Experimenter sends link to the Google form in chat} {Participants access the link/form}

The first two questions of the form I will instruct you on how to fill out. For selecting the team number, please select team number "_" from the dropdown menu. For selecting the number instructed by the experimenter, please select the number "_". Please wait to answer any more questions.

Participants were instructed by the experimenter to select the number "1" if they were in the control condition and "2" if they were in the treatment condition.

{Participants answer both questions} {Experimenter checks for any issues. If not, moves on}

Before completing the remainder of the form, I would like to provide you with closing information. We greatly appreciate you taking the time to participate in this experiment. There will be an email sent as a debrief to explain the purpose of the study and answer any additional questions you may have pertaining to the study. We would be more than happy to answer any questions regarding the study after we have completed the experiment for all 60 participants.

Thank you again for your participation in this experiment. As mentioned earlier, please do not discuss the study, its questions, and the Google form, with anyone else, to ensure our results are a true reflection of our experiment.

The remaining sections of the form include a survey and demographic questions. Please answer all questions honestly. Once again, your answers are anonymous. After you have completed the survey, there will be a few demographic questions for you to fill out that will be used for research purposes exclusively.

If you have any questions while completing the remainder of the form, please let me know. Once you have completed the form, click submit and you may leave the Zoom call. Thank you and enjoy the rest of your day.

{Participants complete and submit the entire Google Form} {Participants leave Zoom call}

{End of Experiment}

APPENDIX 2: TEAM SKILLS MATRIX

Determining Topic Leaders

Topic	Participant A	Participant B	Participant C
Math			
Spatial Relations			
English (Vocabulary)			

Please begin by rating your expertise on each of the three topics where:

1 = low expertise in that topic

5 = average expertise in that topic

10 = high expertise in that topic

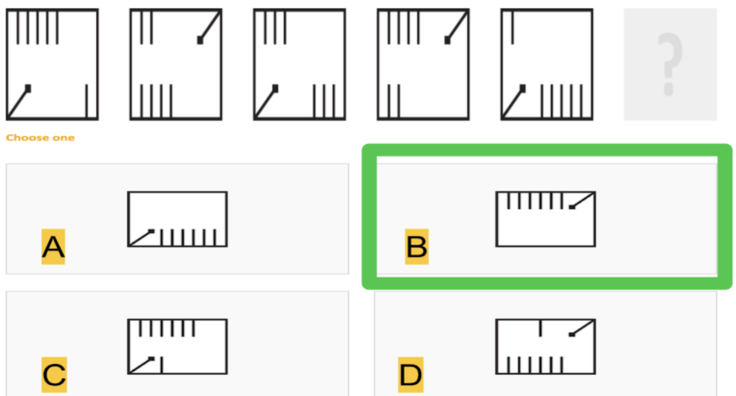
Share with the group 'why' you've rated yourself that way

Once all ratings are complete, we'll use this information to select topic leaders

APPENDIX 3: EXPERIMENT QUESTIONS

Question 1 - Spatial Relations **Leader:**

Which of the figures below best completes the series?



Question 2 - Spatial Relations **Leader:**

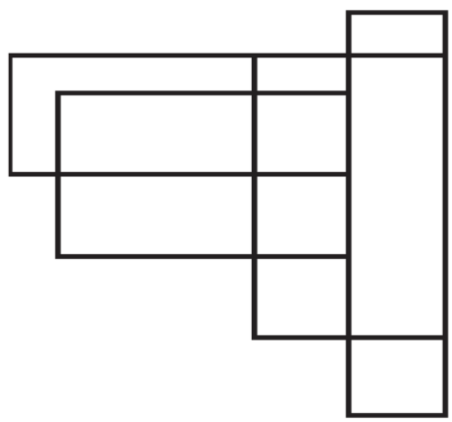
How many four sided figures are in the diagram on the right?

A 16

B 25

C 28

D 31



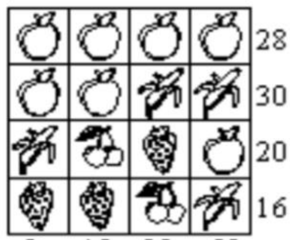
Question 3 - Math

Leader:

Look at the drawing. The numbers alongside each column and row are the total of the values of the symbols within each column and row. What should replace the question mark?

25

Apple = 7
Banana = 8
Cherry = 2
Strawberry = 3



Question 4 - Math

Leader:

If two typists can type two pages in two minutes, how many typists will it take to type 18 pages in six minutes?

6

One typist types one page in two minutes.

Question 5 - Reading Comprehension

Leader:

Conservation stands for the same kind of practical common-sense management of this country by the people that every businessman stands for in the handling of his own business. It believes in prudence and foresight instead of reckless blindness; it holds that resources now public property should not become the basis for oppressive private monopoly; and it demands the complete and orderly development of all our resources for the benefit of all the people, instead of the partial exploitation of them for the benefit of a few. It recognizes fully the right of the present generation to use what it needs and all it needs of the natural resources now available, but it recognizes equally our obligation so to use what we need that our descendants shall not be deprived of what they need.

Which of the following, if true, would most contradict the author's argument in the passage?

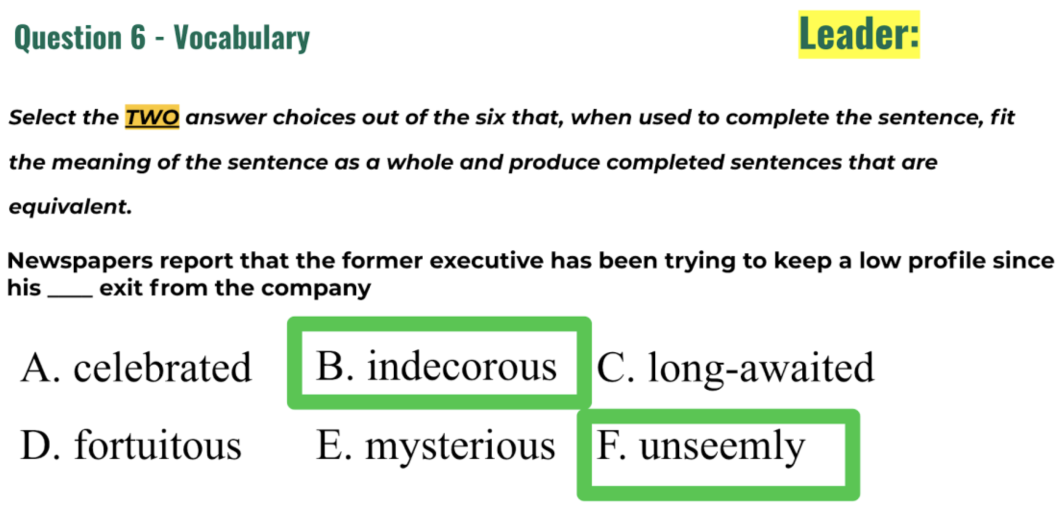
A. Our present-day needs outpace what future generations will need

B. A study proves that the development of public lands for only a few citizens is done in a complete and orderly fashion

C. Most businessmen advocate for private monopolies to manage public assets on the basis of bottom-line profits

D. Private monopolies take better care of the environment than public citizens do

NOTE: The green lines have been inserted to identify the correct answer for each of the six questions above. These



green lines were not shown to the subjects during the experiment. Correct answers were shared with the subjects only after the experiment was complete.

CONSUMER GOSSIP AND BRAND COMMUNITY DYNAMICS

Deirdre McBreen, Siena College
Dr. Kimberley Preiksaitis, Siena College

ABSTRACT

The purpose of this study is to understand the relationship between consumer gossip and its impact on brand community dynamics. While gossip is an everyday activity, it is understudied in the consumer domain. To study how consumers gain value from gossip within brand communities, we observe consumer gossip within the online forum Tattle.Life, where individuals engage in gossip around online content creators who monetize their lives through content production. In this study, we focus on the brand community surrounding content creator Stephanie Jarvis, owner of Chateau de Lalande and creator of "The Chateau Diaries" YouTube channel. We apply interpretive qualitative analysis of 58 forum threads concerning "The Chateau Diaries," and demonstrate that gossip arises within brand communities as a result of tensions among consumers with different interpretations of the content creator. Gossip behaviors arise to address these tensions and encompass three main gossiping practices: sleuthing, enlightening, and imagineering. These practices contribute to the development of a sub-brand community dynamic offering consumers increases in social value. The results of the research suggest that gossip is an avenue for brand managers to maintain the attention of a brand by welcoming the criticism and questions surrounding a brand.

INTRODUCTION

Gossip is a cherished consumer practice that offers individuals social purpose. Consumers who engage in gossiping about beloved brands may not always mesh with the ethos of the brand community, especially when critical viewpoints are raised. When critical viewpoints are unwelcome, consumers may generate boundaries within the brand community to create a space where gossiping can flourish. In this research, we examine the online brand community (Muniz Jr. & O'Guinn 2001; Muniz & Schau 2005) focused on "The Chateau Diaries" YouTube channel that emerges within the Tattle Life web forum. Using interpretive qualitative analysis applying grounded theory techniques, we examine 58 forum threads. Findings suggest that consumers who engage in the gossip practices of sleuthing, enlightening, and imagineering employ gossip to contest the nature of reality presented on the YouTube channel to resolve tensions created through unanswered questions within the main brand community. We contribute to the nascent stream of research on gossiping as an important marketplace practice that contributes to a broader understanding of brand communities.

TATTLE.LIFE AND BRAND COMMUNITIES

Tattle Life (www.Tattle.Life) is a publicly accessible UK-based Internet forum dedicated to anonymous commentary on individuals and groups with monetized public social media accounts (Jones, 2021). Within this web forum, consumers engage in discussing favored content creators, search for and share additional information about the content creator and their lifestyle, and participate in behind-the-scenes conversations on minutiae that not all consumers would be willing to indulge in. In many cases, the desire for greater information goes beyond the scope of the individual being critiqued, to include critiques of the content creators' family and friends (Abraham 2021) as well as the discovery of and gossiping about personal information that may be accessed online but was not originally publicized by the content creator themselves. One of the main goals of Tattle Life is to hold the content creators accountable in areas where they are normally not questioned publicly. Tattle Life began in 2019; as of January 2022, the forum had 16,120 unique forum threads, amassed almost eight million individual messages posted within the threads, and a membership of 304,141 users. The threads within Tattle Life can be considered interconnected mini-communities where individuals are able to bond over their understandings of what goes on in the lives of favored content creators (Muniz and O-Guinn, 2001; Rheingold 1993).

Tattle Life is not the popular phenomenon of "trolling" that people often hear about in online spaces. Trolls lure individuals into pointless conversations and repeatedly engage in attempts to deceive individuals on the internet (Herring 2004, Phillips 2012, Shachaf & Hara 2010). Trolls also tend to disrupt communities (Humphreys 2016). This is not the case in how Tattle Life members interact. Rather, Tattle Life participants often interact simultaneously with the established brand community (e.g., commenting on YouTube videos), while using Tattle Life as a way to "check" a content creators' potential "misrepresentation." Conversations on Tattle Life typically parallel the current content creation and conversations taking place on outside platforms (e.g., YouTube), but differ significantly in their tone, voice and style. Thus, members of Tattle Life collaboratively explore opinions that deviate from the opinions within pre-existing online communities, which differs from deliberate disruption typically observed with trolling behaviors.

Viewed from a different light, Tattle Life may appear related to "anti-fandom" practices due to the divisive opinions that deviate from those shared amongst the content creators' own main platforms. However, Tattle Life is not an anti-fandom community. Anti-fans engage in strong dislike and consider a given text of a genre stupid, and/ or morally bankrupt (Gray 2003, Click 2019). In comparison, Tattle Life members engage in passionate discussions about their favoritism of content and their curiosity around the development of the content itself. While the critique observed in Tattle Life forums is strong (and quite often harsh), it does not represent dislike and hatred. Although many media accounts of Tattle Life describe the site as "toxic," viewed as a source of gossip, Tattle Life can be observed as a rich cultural site in which to explore the emergent role of gossip in consumer brand communities.

GOSSIP AS A CONSUMER PRACTICE

As a society, we have a particular understanding of gossip and its ability to act as a useful social tool. Oftentimes gossip is seen as unproductive, idle chatter, however, the functionality of gossip assists individuals in everyday social interactions. Gossip is understood as a commonplace consumer practice that assists in the creation and maintenance of social groups (Baumeister, Zhang, and Vohs 2004; Dunbar 2004; Feinberg, Willer, and Schultz 2014; Gluckman 1963; Rosnow and Fine 1976). Gossip occurs informally and it often helps individuals make sense of their social lives (Swidler 1986, Maitlis 2005). It is also distinct from rumors, folk tales, and urban legends (Aditya and Darke 2020; Feinberg, Willer, and Schultz 2014; Kamins, Folkes, and Perner 1997; Rosnow 1977; Rosnow and Fine 1976). Thus, gossip is a useful social tool that enables individuals to address a common social issue: the free-rider problem (Dunbar, 2004).

According to Dunbar (2004), engaging in gossip enables four functions: to seek advice and discuss hypotheticals; to police others within a group; to advertise the self; and to deceive others. As gossip is a regular social phenomenon that offers value to consumers, we can apply notions of gossip to better understand the behaviors of consumers engaging in gossip within brand communities.

Presently, gossip behaviors within brand communities is not well understood; previous research focuses on diversity of community composition (Thomas, Price and Schau 2013) and community practices that create value (Schau, Muniz, and Arnould 2009). Meanwhile, gossip is implicated in many brand community papers as a relevant consumer practice, but it is never discussed in its own right. Yet, the nature of brand communities implicitly incorporates gossip-related behaviors, including: boundary formation in social groups (Barkow 1995; Gluckman 1963); maintenance of social orders (Suls 1997); and, exertion of control over those within the group (Feinberg, Willer, and Schultz 2014; Gluckman 1963; Rosnow and Fine 1976). As we can tell through the progression of gossip and its power within a brand community, we can see that it helps organize the community in a way that individuals understand in the space. Thus, it’s important to understand consumption practices related to gossip to more fully understand brand community dynamics.

RESEARCH CONTEXT

To explore consumer gossip and brand community dynamics, we examine the Tattle Life forum threads that concern the content creator Stephanie Jarvis, creator of “The Chateau Diaries” YouTube channel. “The Chateau Diaries” YouTube channel was created in 2018 to highlight the daily life of renovation and restoration work at the Chateau de Lalande, a 16th century chateau located in the Indre department of France.

Presently, Stephanie, one of Lalande’s owners, produces two to three weekly “vlogs” involving scenes of daily life, renovation projects, social gatherings, and problem-solving amongst herself and the current “cast” of residents, which range from permanent residents, semi-permanent residents, short-term guests, and volunteers who work on site in exchange for room and board. As a result of a sharp increase in viewership throughout 2020, the YouTube channel has grown from ~17,000 subscribers in January 2020 to more than 175,000 subscribers in January 2022. Stephanie also manages one of the top 350 Patreon.com accounts globally and has a monthly income of more than $34,000, generated from more than 3,700 individual monthly Patreon contributors. These funds are now a central driving force in the ongoing restoration of Chateau de Lalande. Additionally, advertising revenue earned through the YouTube platform now contributes to the ongoing salaries and running costs of Chateau de Lalande.

As a result of the growth in subscribers and viewers for “The Chateau Diaries”, as well as the creation and management of the Patreon account, Stephanie has become a micro-celebrity (Marwick 2014) who directly manages two important brand community groups. First, she engages with the fanbase that watches and comments on her YouTube videos by regularly interacting in real-time with the ~3,000 individuals who participate in the bi-weekly premiere of new videos on her YouTube channel. This is done through the chatting function available during premieres as well as engaging in replying to comments on videos after the fact. Second, she interacts on a weekly basis with her Patreon subscribers, who each donate a monthly amount of money to gain access to extra content while being able to provide more direct input to the ongoing restoration and renovations of Chateau de Lalande. Patreon members receive a weekly exclusive video and can engage in discussing the video through the Patreon platform. These two groups arguably act as traditional 'brand communities' in that they each share a consciousness of kind, rituals and traditions, and a shared sense of moral responsibility (Muñiz and O'Guinn 2001).

Prior to beginning the YouTube channel, Stephanie and Chateau de Lalande was featured regularly on the UK-based reality television show "Chateau DIY" which allowed Chateau de Lalande to gain fans and often improves B&B traffic at the Chateau.

Beginning in September 2020, consumers of the YouTube channel organically began a forum discussion on the Tattle Life forum website. While engagement with The Chateau Diaries forum threads began slowly, the number of participants and frequency of engagement quickly increased. Members of "The Chateau Diaries" Tattle Life forum demonstrate a shared consciousness of kind, have created rituals and traditions, and share a sense of moral responsibility (Muñiz and O'Guinn 2001), despite their purposeful operation outside the two main brand communities that have already been established. In this research, we examine the Tattle Life content surrounding "The Chateau Diaries" to understand the nature of consumer gossip and its relation to brand community dynamics.

METHODOLOGY AND DATA COLLECTION

Methodology

We adopt the methodological approach of Digital Methods, which is a growing tradition in social sciences (Rogers 2013) and an appropriate qualitative research method within digital environments (Arvidsson and Caliandro 2016; Caliandro 2018; Caliandro and Gandini 2017; Marwick 2014). A Digital Methods approach allows us to "follow the thing, follow the medium, follow the natives" (Caliandro and Gandini 2017, p. 63). To systematically review the data using a Digital Methods approach, we digitally captured the public-facing Tattle Life forum pages while also continually viewing the data through their original platforms as they were being generated by consumers. The public nature of the communication allows us to refer back to specific data in situ, offering greater depth of reflection and analysis.

The analysis procedures applied in this project are grounded in interpretive, qualitative analysis (Hudson and Ozanne 1988; Spiggle 1994; Thompson 1997) and adopt a constant comparative model (Glaser and Strauss 2017) iterating between data exploration and theorizing sensitized by our perspectives of brand community and consumer gossip. In line with Caliandro and Gandini (2017, p. 191), we treat our data as 'networked texts' rather than discrete data points, and we worked within and across those texts in relation to the YouTube content and its relation to where it occurred in time during all stages of our analysis.

A coding scheme was developed based on depth examinations of individual forum feeds, which was reviewed against subsequent forum feeds; this iterative review is like the process employed by Marwick (2014, p. 118) in which "pilot coding" is performed to construct a code base using a subset of data, which is then refined through iteration throughout the data collection and examination. It is based on grounded theory approaches (Charmaz 2006) but adapted to the dynamic nature of ongoing data generation on social platforms.

Data Collection

Tattle Life Data Set. To capture the digital data available on the public-facing website, Tattle Life, we created a custom Python script using the "Beautiful Soup" library. The script was run manually on a weekly basis to capture relevant digital traces for subsequent qualitative analysis. Tattle Life organizes content by individual forum feeds which can have up to ~1,000 posts. When a particular feed reaches this threshold, the feed is locked by site moderators, and a news feed must be created by individual consumers. Weekly data captures therefore focused on any newly generated forums that had been locked or completed. Each captured forum data record contains the text of the post, any quoted text (typically a new post replies to an existing post, and therefore a segment of quoted text may be embedded in the new post), author, author title, reaction count, and date/time of the post. Data collection began in May 2021 and involved gathering all historical forum threads while continuously capturing new forum threads as they were generated. Included for analysis in this paper are 58 forum threads that span one calendar year. The data set contains 58,978 individual posts. Please see Table 1 for more information.

Depth Interviews. Five depth interviews were completed with the content creator, Stephanie Jarvis in Spring 2021. Interviews were semi-structured, beginning with grand tour questions (McCracken 1988) which provide a framework for the conversation. Interviews were conducted via Zoom. All audio recordings were transcribed, and the transcripts, author notes, and observations of the interviews are included in the analysis.

"The Chateau Diaries" YouTube Videos. As the forum data is grounded in the happenings of the YouTube channel, video viewing throughout the data capture period provides a basis for the contextual nature of the conversations occurring within the Tattle Life forum. Videos were collected using a video downloading tool; the first author viewed all videos as they were posted and the second and third authors viewed selective excerpts that provided contextual information in reviewing the forum posts.

Supplementary Artifacts. Additional sources of information were consulted to help understand the context. This includes viewing the "Chateau DIY" television episodes that featured Chateau de Lalande prior to their YouTube viewership increase as well as web-based artifacts that have arisen throughout the growth and development of the YouTube channel. Many of these resources are commonly referred to within the Tattle Life forum posts.

Table 1: Data Set Overview

Type	**Source and Methods of Collection**	**Date Range**	**Data Set**
Tattle.Life Forum Posts	Digital data capture via Python library Beautiful Soup of text of posts, author, author title, reaction count, and date/time	September 2020 – September 2021	58 forum threads 58,978 posts
The Chateau Diaries YouTube Videos	The Chateau Diaries YouTube Channel videos	September 2018 – September 2021	420 videos
Depth Interviews	Zoom interviews with Stephanie Jarvis, content creator for "The Chateau Diaries"	Spring 2021	5 interviews 7 hours of audio 68,183 words
Château DIY Episodes	Viewing of Channel 4 television episodes via online website	Air dates: 2018 – 2020 Viewing and field note creation:	16 episodes 3,329 words (episode field notes)

		Summer 2020	
Web-Based Artifacts	Chateaudelalande.com; Media sites (e.g., CNN Travel); Amazon.com / RothwellPublishing.com	2019 – 2020	114 images 6 media articles 1 e-commerce page

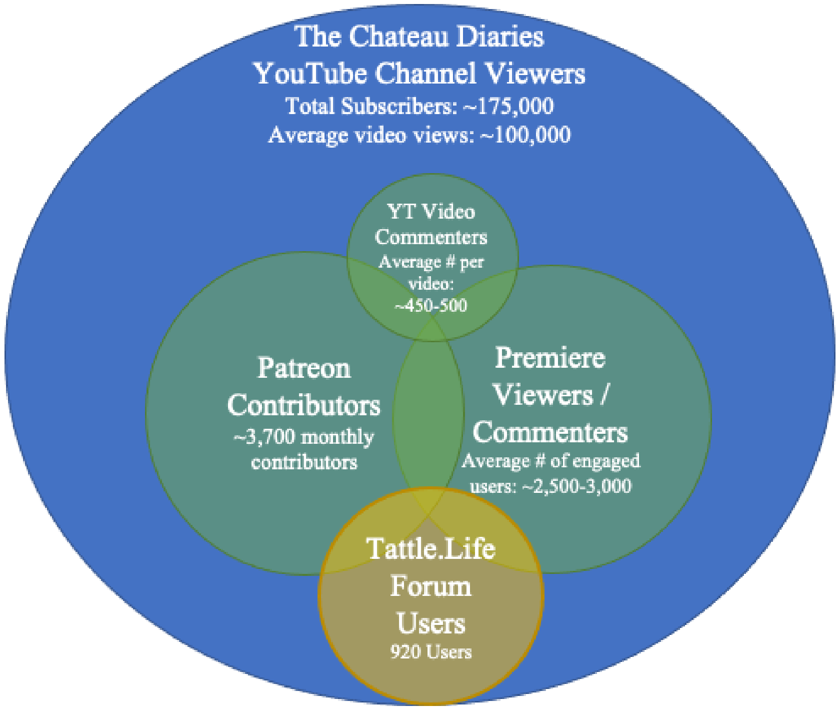
FINDINGS

Structure of the Tattle Life Brand Community

Brand communities are typically thought to involve homogeneous groups of consumers who share common characteristics (Muniz & O'Guinn 2001); studies show that consumer communities are often more heterogeneous in nature (Thomas, Price and Schau 2013). Observations of Tattle Life consumers who engage with "The Chateau Diaries" forums reveal that heterogeneous groups of consumers do surround the brand, but leverage different platforms to communicate in different ways. While online content creators drive attention and engagement through chosen platforms (e.g., YouTube for "The Chateau Diaries"), oftentimes, consumer communities may leverage multiple online spaces to engage with one another about the content creator's content. At a broad level, consumers who engage in community behaviors surrounding "The Chateau Diaries" and content creator Stephanie Jarvis typically include consumers who view Château DIY television episodes featuring Château de Lalande, consumers who watch "The Chateau Diaries" YouTube content, and consumers who contribute monthly financial contributions to Stephanie Jarvis via Patreon. A visual overview of the communities surrounding Stephanie Jarvis and her Youtube Channel is visible in Figure 1. We observe that consumers who engage in the Tattle Life "The Chateau Diaries" forums leverage the features of the platform as well as their conversational style in order to respond to and create their own social boundaries, which enable them to eliminate or screen consumers from their community. Notably, Tattle Life is not the largest community surrounding "The Chateau Diaries", but it tends to be the most critical of her actions. Within Tattle Life, we are able to see the social value that communities can bring that may not strictly praise a brand.

When analyzing the role of gossip within Tattle Life, certain tensions underlie conversations within the Tattle Life brand community. One core tension involves the "free rider problem" (Dunbar, 2004) where individuals in the forum express sentiments suggesting that Stephanie has gained popularity on the YouTube platform without "earning" it. Many individuals within Tattle Life discuss their feelings involving being perplexed by reactions from the core brand community (e.g., YouTube) which express outward adoration of the channel's content and the content creator. Through their gossip, Tattle Life members wrestle with their understanding of Stephanie's fame and wealth creation which focuses on their differences of thought compared with the sentiments shared within other brand community platforms adjacent to "The Chateau Diaries."

Figure 1: The Chateau Diaries Brand Community Populations

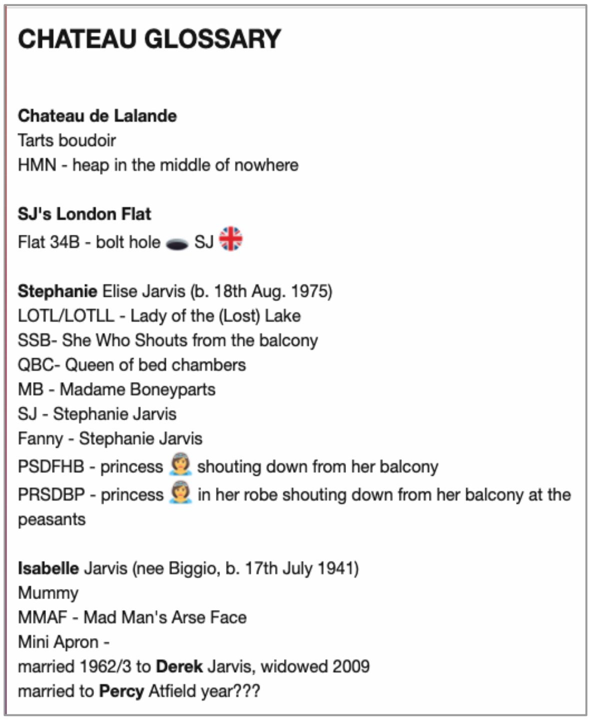


Another tension that is emergent within Tattle Life involves notions of privilege, pertaining to the free-rider problem. Tattle Life members share joint concern over the contextual situation presented in "The Chateau Diaries" and the role that privilege plays in the presentation of content. Many core brand community members find the notion of a single woman owning and operating a historic French chateau to be a dreamy fantasy which they get to experience vicariously through the content produced on "The Chateau Diaries" and wish to support the ongoing restorations which are presently taking place (and are visible in the video content). However, Tattle Life members question the privileged position that is visible in the video content, and their discussions contrast the notions of dreamy fantasies by discussing the financial implications of the property and other important issues grounded in reality that support their "free rider" perspective on the content creator.

Ultimately, consumers who participate in Tattle Life join and participate in the Tattle Life community when they feel that their viewpoints are not being fairly or justly addressed by the core brand community. When community members reject their questions or comments posted on YouTube, this prompts those consumers to question their community affiliation. As a result, these consumers arrive at Tattle Life to find a more welcoming space that aligns with their viewpoints on the content creator. However, membership in the main brand community is maintained, yet critiqued and leveraged as a discussion point within the Tattle Life community. Thus, communication within the Tattle Life forums involves gossiping through user-generated content which enables Tattle Life members to generate their own social value through gossiping practices. Members of Tattle Life employ coded language which allows them to have private conversations, despite the public-facing nature of the forum. For example, nicknames as well as other acronyms are created as a method of deceiving others of the nature of the conversation (Figure 2).

Due to the emergent tensions arising for some brand community members, these consumers seek to resolve these tensions through the practices of gossip within the Tattle Life forums. This resolution is founded on a quest for truth, enabled through the practices of gossip. This quest for truth allows consumers to make sense of various social worlds surrounding the content creator, and aids in developing new understandings relating to “The Chateau Diaries.” Through the quest for truth, we observe consumers participating in three significant practices: sleuthing, enlightening, and imagineering.

Figure 2: The Chateau Diaries Tattle Life Glossary



CHATEAU GLOSSARY

Chateau de Lalande
Tarts boudoir
HMN - heap in the middle of nowhere

SJ's London Flat
Flat 34B - bolt hole 🕳 SJ 🇬🇧

Stephanie Elise Jarvis (b. 18th Aug. 1975)
LOTL/LOTLL - Lady of the (Lost) Lake
SSB- She Who Shouts from the balcony
QBC- Queen of bed chambers
MB - Madame Boneyparts
SJ - Stephanie Jarvis
Fanny - Stephanie Jarvis
PSDFHB - princess 👸 shouting down from her balcony
PRSDBP - princess 👸 in her robe shouting down from her balcony at the peasants

Isabelle Jarvis (nee Biggio, b. 17th July 1941)
Mummy
MMAF - Mad Man's Arse Face
Mini Apron -
married 1962/3 to **Derek** Jarvis, widowed 2009
married to **Percy** Atfield year???

Sleuthing

Sleuthing behaviors are grounded in consumers' desires to seek and disseminate information to others that is not included in the content creator’s regular postings, but that the consumers’ feel is important to know. When engaging in sleuthing behaviors, consumers gather and assemble disparate information from many sources in a democratized fashion. The information gathering attempts to bridge information gaps and link informational items together like “puzzle pieces” to create new understandings of the content creator. Evidence of sleuthing behaviors surrounding “The Chateau Diaries” often involve attempts to better understand Stephanie Jarvis’s life story beyond what she reveals on YouTube. In one example, we see consumers assembling information from historical sources to try and understand Stephanie’s past relationships as well as her upbringing:

@overthinkingit said:
LaLande Teatime 🫖
Stephanie Jarvis:
[Attached image]
this is so cute.

"Having recently been married herself" Given this webpage is from early 2001, we can assume she married in 2000.

> *@Takeaway replied:*
> *Exactly & thanks for all this I would love to know who she married?*
> *Gerry just posted this on the lalande page Stephanie is one clever cookie [Attached image]*

In the first post, user @overthinkingit found and provided to the Tattle Life audience a screenshot image of an outdated website that was likely created by Stephanie many years ago. The image includes resume-like dates and details about Stephanie's personal life, including a reference to her then relationship status. As Stephanie does not speak directly about her past relationships in her video content due to the focus on renovations of Chateau de Lalande and daily experiences with those who are presently living at the Chateau, Tattle Life members take great interest in sourcing information about Stephanie's personal life outside of the content she provides directly, attempting to see beyond the confines of the provided frame. The poster concludes that as a result of this find, it's likely that Stephanie was married in the year 2000, which seemingly confirms that something of note has been found and provided to the Tattle Life community. We see that the poster uses the culturally relevant term "teatime" to help promote the salaciousness of the find, celebrating their new piece to the part of Stephanie's life that has not yet been uncovered.

User @Takeaway replies to @overthinkingit by adding content sourced from a post from the Facebook Group which is focused on celebrating Chateau de Lalande called, "Escape to Chateau de Lalande & More." The Facebook post was originally posted by Gerry, Stephanie's brother, and featured a newspaper clipping of Stephanie as a young girl. @Takeaway leverages this content from this adjacent sub-community surrounding "The Chateau Diaries" to better clarify background details that are not revealed in the regular content produced for the YouTube channel. By taking this clipping to the Tattle Life forum, @Takeaway leverages a celebratory contribution within Facebook in order to clarify and puzzle out greater meaning within the Tattle Life community.

While many different external sources of information are leveraged by members of the Tattle Life community, their main focus is to continually build a greater understanding of the content creator through whatever means are available to those within the community. Bringing meaningful pieces of information forward are celebrated moments while allowing community members to further engage in gossip surrounding these new items of information.

Enlightening

Consumers are motivated to engage in gossip practices to achieve various outcomes. As Dunbar (2004) suggests, gossip can serve as a means of self-promotion. Evidence from Tattle Life suggests that consumers engage in status-oriented practices grounded in the dissemination of "behind the scenes" information in order to entertain Tattle Life audiences. Specifically, these instances which reveal "behind the scenes" information are connected to a Tattle Life members' ability to provide "insider information" due to their proclaimed connections or direct familiarity with Chateau de Lalande itself. We refer to this practice as Enlightening, as these instances of self-promotion both reveal new information to the Tattle Life audience while also generating revised understandings of The Chateau Diaries in the minds of those who contribute to Tattle Life through resulting conversation generation. In the example that follows, we see @Clara Burnett, a user that claims direct familiarity to Chateau de Lalande through their own circle of friends, provide background information on a guest who is currently at the Chateau, but not necessarily present in the public-facing video content:

> *@Clara Burnett said:*
> *Looks like Kim Raad is back at the shittoo, as seen on her instagram @kimkaraad*
> *She's one of SJ's longtime Dutch friends, the one with the professor husband Imar and their child Walt who were all present at the Covid Christmas Party that should never have happened because of the rules and regulations. Interesting to see she's still supporting SJ's endeavors after that, but not really a surprise. My bet is they will try to stay out of the vlogs, but SJ will accidentally on purpose have them it anyway to cause some drama there.*

In this statement, user @Clara Burnett provides details and directive opinions on how to view this guest at the Chateau. @Clara Burnett is well-established within the Tattle Life community as potentially having first-hand experience/knowledge of the content creator, but adamantly does not reveal their identity. @Clara Burnett often uses their "inside access" to the Chateau as leverage to change the conversations surrounding the content creator. In this posting, @Clara Burnett provides a direct critique of the content creator (SJ) and her content production, suggesting that these guests who are longtime friends are not necessarily interested in being shown publicly on video despite the need of Stephanie to continually create content which leverages those who are presently living or staying at Chateau de Lalande. This comment subtly highlights to the Tattle Life audience a dynamic that can't be seen on camera – the nature of what is shown and what is not shown to the audience. Through these types of contributions, @Clara Burnett entrenches her position as a source of direct knowledge on Chateau de Lalande and, over time, has become a go-to source for information that Tattle Life members employ to adapt their understanding of the content creator.

As a result of @Clara Burnett's consistent contributions to the Tattle Life community, her status within the Tattle Life community increases over time. This is most clearly evidenced when @Clara Burnett is praised for her previous insights on the inhabitants of Chateau de Lalande when the content creator publicly acknowledges a relationship within the household that was not previously discussed, yet had been going on for a significant amount of time:

> *@AndAnotherName said:*
> *I recall, correct me if I am wrong. But @ClaraBurnett mentioned aeons ago that they were spotted walking hand in hand in the local town. So when was that? We have known since then and I had no doubt at all when the red cushion kept appearing in the vlogs in her 'boudoir'. Ugh!*
>
> *@Marquis de Potpourii said:*
> *I TIP MY HAT TO YOU AND YOUR SOURCE, LADY WHISTLEDOWN @Clara Burnett [Image of Lady Whistledown]*

In these two examples, we see that users @AndAnotherName and @Marquis de Potpourii credit @Clara Burnett for the reliability and accuracy of her contributions once they match publicly facing information. In the first comment, @AndAnotherName builds on the earlier assertions of @Clara Burnett by adding their own observations from video content which selectively supports their viewpoint on the situation, while @Marquis de Potpourii invokes a cultural reference of "Lady Whistledown," comparing Clara Burnett to the literary character best known for publicly spilling the secrets of the high society while remaining anonymous. Although those who can contribute to Tattle Life in an enlightening manner are in the minority, the volume of conversation and resulting gossip that arises is highly significant. Contributions such as these moves change the conversation in meaningful ways, suggesting that supposed insiders both benefit themselves from their ability to provide important information while also commanding power over others with their "insider" information.

Imagineering

Not all contributions of gossip originate from actions in reality or truths behind the screen. Some contributions come straight from the curious minds of those who participate in the gossip themselves. In order for individuals to express their theories about what goes on outside of what is revealed, they share the stories of what they believe to be the truth. By diving deeper into what they believe to be true, individuals can participate in gossip to grow their understanding of what they believe in comparison to what others believe is true behind the screen.

Imagineering is a status-oriented practice grounded in the creative reconstruction of information to entertain Tattle Life audiences. This practice involves storytelling and combines selected information to generate holistic representations to eliminate information gaps. Imagineering provides new interpretations, specifically designed for public consumption. Imagineering is often a tool to create conversations centered around people in the vlogs that are not fully explored in the content available to the viewers. An example of Imagineering focused on "The Chateau Diaries" is shown below:

@Mummy Dearest said:
Let's play a game… WHat will Steph and Philip buy today? …
1. An oil painting in a gilded frame (the old painting will get stored in the attic, but the gilded frame is for Daddy's artwork)
2. Another toile bedspread that matches the bed crown paaarfectly
3. A lamp with a ceramic base depicting two squirrels having sex (that's a Philip purchase)
4. A rusty cake tin shaped like castle (from the Disney Princess collection by Wilton)
5. A ring for hosing belladonna to slip the drinks of her foes
6. Another desk for Philip, he likes to separate work from coloring book art
Well it's about that time to find out, I'm almost peeing myself with anticipation!

In this example, user @Mummy Dearest creates lyrical content by leveraging their own, and the Tattle Life community's own knowledge of the content creator and their past content creations. Through this contribution, @Mummy Dearest speculates and paints a picture of what might appear in an upcoming video that has been announced (the video suggests it will involve going antiquing with her boyfriend). Through the numbered suggestions, Mummy Dearest illustrates how they view the personalities of the content creator (and her boyfriend) for others to enjoy and be entertained by. By creatively imagining what goes on outside of what is shown on the screen, @Mummy Dearest adds to the cumulative unsaid narrative contained within the Tattle Life community. By indulging in untold stories, the members of Tattle Life form their own entertainment, assisting in generating opportunities for conversational gossip to flourish, even in the absence of content from the content creator.

DISCUSSION

From our research on consumer gossip and brand community dynamics, we can conclude that research improves our understanding of gossip as a fundamental consumer practice. Prior research supports the suggestion that gossip is a common consumer practice whereby consumers create and maintain social groups (Baumeister, Zhang, and Vohs 2004; Dunbar 2004; Feinberg, Willer, and Schultz 2014; Gluckman 1963; Rosnow and Fine 1976). From analyzing behaviors observed within the Tattle Life forum, we have found that, through the presence of gossip, individuals generate social value through their shared criticism of "The Chateau Diaries" and the content creator. Consumers within Tattle Life leverage their own viewpoints on the content in order to build a cohesive sub-community that is both embedded within the adjacent communities yet separate and distinct from the adjacent communities. Gossip not only grows the social ties within groups, but it ensures that interpersonal relationships built through brand communities may maintain the relationships that are built within the brand.

Through this study, we observe and articulate three consumer gossip practices: sleuthing, enlightening, and imagineering. These three practices contribute to the creation of social value generated through gossip. Sleuthing allows individuals within brand communities to bring new information to the community through deep research on the brand, offering excitement through the knowledge that an individual within the community uncovered a previously hidden detail to a brand that had not yet been revealed. Enlightening creates value for consumers through the explicit recognition that there is always an untold story of a brand. As privileged insiders are able to reveal "inside information" to the rest of the members of a community, enlightening offers a status creation opportunity for consumers in the community itself. Lastly, imagineering allows for user-generated content creation that enables individuals to explore unconfirmed theories, generate suggestive ideas for the content creator, and to generate greater meaning for consumers who are attempting to "close the gaps" between what they see through content creation from the creator and what they speculate might be true. Throughout all of these practices, individuals are able to generate deeper meaning and forge meaningful connections with like-minded consumers.

Overall, gossip is linked to symbolic boundary work undertaken by brand community members (e.g. what kinds of questions are allowed to be asked; nature of acceptable participation as dictated by community gatekeepers). Gossip allows the social value within brand communities to grow, allowing them to isolate people from the group that they generate. The gossip that exists within the Tattle Life community allows them to grow the norms associated with their contributions to a forum. Gossiping also relies on a passionate, ongoing connection to the brand community and its workings. At times, this means specifying acceptable topics to communicate about within the group. "Members" within a particular community often take responsibility for communicating in a certain way. The stronger the presence of gossip is in the community, members are more likely to enforce norms related to their specific sub-community.

For brand managers, gossip can enable brand value creation. While often overlooked, gossip has the potential to generate playful approaches to consumer-led questions rather than antagonizing sub-groups of consumers towards anti-fan behaviors. Gossip allows for communities outside a brand to continue the generation of social value past the boundaries created by the brands themselves. In order for a brand manager to grow the value in which individuals can make from a brand, they can encourage communities outside of it to grow. Criticism outside of a brand can encourage those who are not considered "fans" of a brand to continue to be engaged in how the brand grows. Oftentimes, criticism of a brand seems to be neglected when considering what brings value to the brand itself. However, criticism could allow for additional conversations to surround a brand and what occurs in association with the brand. Criticism could be welcomed to welcome more attention toward a brand and the value that it could bring.

REFERENCES

Abraham, E. (2021). “Thousands of Women Are Being Trolled on 'Gossip Forum' Tattle Life and Some Are Scared to Leave the House”. *Glamour UK Online.* Retrieved April 11, 2022.

Aditya, Sutapa and Peter R. Darke (2020), “Role of Entertainment, Social Goals, and Accuracy Concerns in Knowingly Spreading Questionable Brand Rumors,” *Journal of the Association for Consumer Research*, 5 (2), 220–37.

Arvidsson, Adam and Alessandro Caliandro (2016), “Brand Public,” *Journal of Consumer Research,* 42 (5), 727–48.

Barkow, Jerome H. (1995), “Beneath New Culture Is Old Psychology: Gossip and Social Stratification,” in *The Adapted Mind : Evolutionary Psychology and the Generation of Culture Account*, J. H. Barkow, L. Cosmides, and J. Tooby, eds., Oxford University Press, 627–37.

Baumeister, Roy F., Liqing Zhang, and Kathleen D. Vohs (2004), “Gossip as cultural learning,” *Review of General Psychology*, 8 (2), 111–21.

Caliandro, Alessandro (2018), “Digital Methods for Ethnography: Analytical Concepts for Ethnographers Exploring Social Media Environments,” *Journal of Contemporary Ethnography*, 47 (5), 551–78.

Caliandro, Allessandro and Allessandro Gandini (2017), *Qualitative Research in Digital Environments*, New York: Routledge.

Charmaz, Kathy (2006), *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*, Thousand Oaks: SAGE Publications Ltd.

Click, Melissa A. (2019), *Anti-Fandom: Dislike and Hate in the Digital Age*, New York: New York University Press.

Dunbar, R. I. M. (2004), “Gossip in evolutionary perspective,” *Review of General Psychology*, 8 (2), 100–110.

Feinberg, Matthew, Robb Willer, and Michael Schultz (2014), “Gossip and Ostracism Promote Cooperation in Groups,” *Psychological Science*, 25 (3), 656–64.

Glaser, Barney G. and Anselm L. Strauss (2017), *The Discovery of Grounded Theory: Strategies for Qualitative Research*, New York: Routledge.

Gluckman, Max (1963), “Papers in Honor of Melville J. Herskovits: Gossip and Scandal,” *Current Anthropology*, 4 (3), 307–16.

Gray, Jonathan (2003), “New Audience, New Textualities: Anti-Fans and Non-Fans,” *International*

Journal of Cultural Studies, 6, 64–81.

Hudson, Laurel Anderson and Julie L. Ozanne (1988), "Alternative Ways of Seeking Knowledge in Consumer Research," *Journal of Consumer Research*, 14 (4), 508–21.

Jones, M. (2021). "Tattle's Law - End the Wild Wild West of Social Media." Lime Goss, Lime Goss, 21 Sept. Retrieved April 11, 2022.

Kamins, Michael A., Valerie S. Folkes, and Lars Perner (1997), "Consumer responses to rumors: Good news, bad news," *Journal of Consumer Psychology*, 6 (2), 165–87.

Maitlis, Sally (2005), "The Social Processes of Organizational Sensemaking," *Academy of Management Journal*, 48 (1), 21–49.

Marwick, Alice E. (2014), "Ethnographic and Qualitative Research on Twitter," in *Twitter and Society*, K. Weller, A. Bruns, J. Burgess, M. Mahrt, and C. Puschmann, eds., New York: Peter Lang, 109–21.

Muñiz, Albert M. Jr. and Thomas C. O'Guinn (2001), "Brand Community," *Journal of Consumer Research*, 27 (4), 412–32.

Muñiz Jr., Albert M. Jr and Hope J. Schau, (2005), "Religiosity in the Abandoned Apple Newton Brand Community," *Journal of Consumer Research*, *31*(4), 737–747.

Phillips, Whitney M. (2012), "This is Why We Can't have Nice Things: The Origins, Evolution and Cultural Embeddedness of Online Trolling." University of Oregon.

Rheingold, Howard. (1993). *The Virtual Community: Homesteading on the Electronic Frontier*, Addison Wesley.

Rogers, Richard (2013), *Digital Methods*, *Digital Methods*, Cambridge, MA: MIT Press.

Rosnow, Ralph L. (1977), "Gossip and Marketplace Psychology," *Journal of Communication*, 27 (1), 158–63.

Rosnow, Ralph L. and Gary Alan Fine (1976), *Rumor and Gossip: The Social Psychology of Heresay*, New York: Elsevier.

Schau, Hope Jensen, Albert M. Jr. Muñiz, and Eric J. Arnould (2009), "How Brand Community Practices Create Value," *Journal of Marketing*, 73 (5), 30–51.

Spiggle, Susan (1994), "Analysis and Interpretation of Qualitative Data in Consumer Research," *Journal of Consumer Research*, 21 (3), 491–503.

Suls, Jerry M. (1977), "Gossip as Social Comparison," *Journal of Communication*, 27 (1), 164–68.

Swidler, Ann (1986), "Culture in Action: Symbols and Strategies," *American Sociological Review*, 51 (2), 273–86.

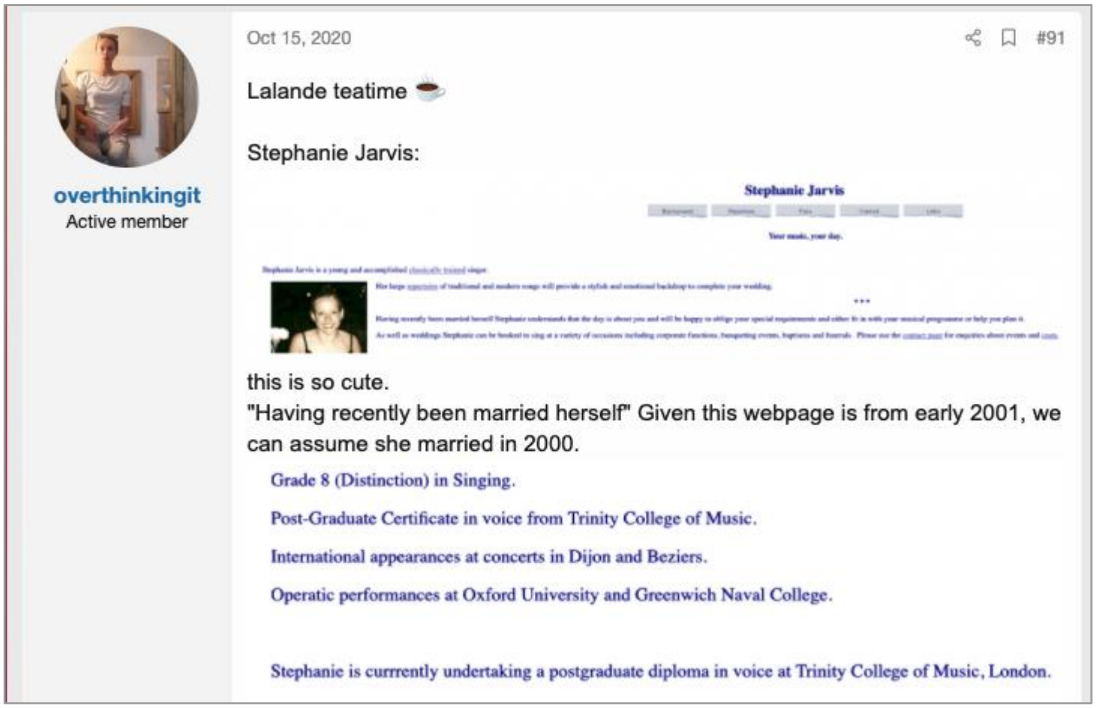
Thomas, Tandy Chalmers, Linda L. Price, and Hope Jensen Schau (2013), "When Differences Unite: Resource Dependence in Heterogeneous Consumption Communities," *Journal of Consumer Research*, 39 (5), 1010–33.

Thompson, Craig J. (1997), "Interpreting Consumers: A Hermeneutical Framework for Deriving

Marketing Insights from the Texts of Consumers' Stories," *Journal of Marketing Research*, 34 (4), 438–55.

APPENDICES

Tattle Excerpted Images: Sleuthing



overthinkingit
Active member

Oct 15, 2020 #91

Lalande teatime ☕

Stephanie Jarvis:

Stephanie Jarvis

this is so cute.
"Having recently been married herself" Given this webpage is from early 2001, we can assume she married in 2000.

Grade 8 (Distinction) in Singing.

Post-Graduate Certificate in voice from Trinity College of Music.

International appearances at concerts in Dijon and Beziers.

Operatic performances at Oxford University and Greenwich Naval College.

Stephanie is currrently undertaking a postgraduate diploma in voice at Trinity College of Music, London.

T

Takeaway
Active member

Oct 15, 2020 #97

> overthinkingit said:
>
> Lalande teatime ☕
>
> Stephanie Jarvis:
> View attachment 276510
> this is so cute.
> "Having recently been married herself" Given this webpage is from early 2001, we can assume she married in 2000.
>
> Click to expand...

Exactly & thanks for all this 👍 I would love to know who she married? 🧐

Gerry just posted this on the lalande page Stephanie is one clever cookie ⭐

Attachments

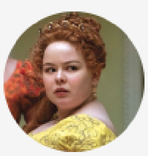
5025676B81DD08-...
124.5 KB Views: 285

Last edited: Oct 15, 2020

Like Quote

SableOnBlonde, Calvignac, peony89 and 4 others

Tattle Excerpted Images: Enlightening



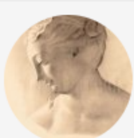
Clara Burnett
VIP Member

Aug 5, 2021 #566

Looks like Kim Raad is back at the shittoo, as seen on her instagram @kimkaraad
She's one of SJ's longtime Dutch friends, the one with the professor husband Imar and their child Walt who were all present at the Covid Christmas Party that should never have happened because of the rules and regulations. Interesting to see she's still supporting SJ's endeavors after that, but not really a surprise. My bet is they will try to stay out of the vlogs, but SJ will accidentally on purpose have them it anyway to cause some drama there.

Like

Petit Sange, Hemerocallis, LonePalm and 18 others



AndAnotherName
Well-known member

Nov 3, 2021 #95

I recall , correct me if I am wrong, but @Clara Burnett mentioned aeons ago that they were spotted walking hand in hand in the local town. So when was that? We have known since then and I had no doubt at all when the red cushion kept appearing in the vlogs in her 'boudoir'. Ugh!

Like

Bored Mermaid CC, Camembert, eakpe90046 and 24 others

Marquis de Potpourri
VIP Member

Nov 3, 2021 #81

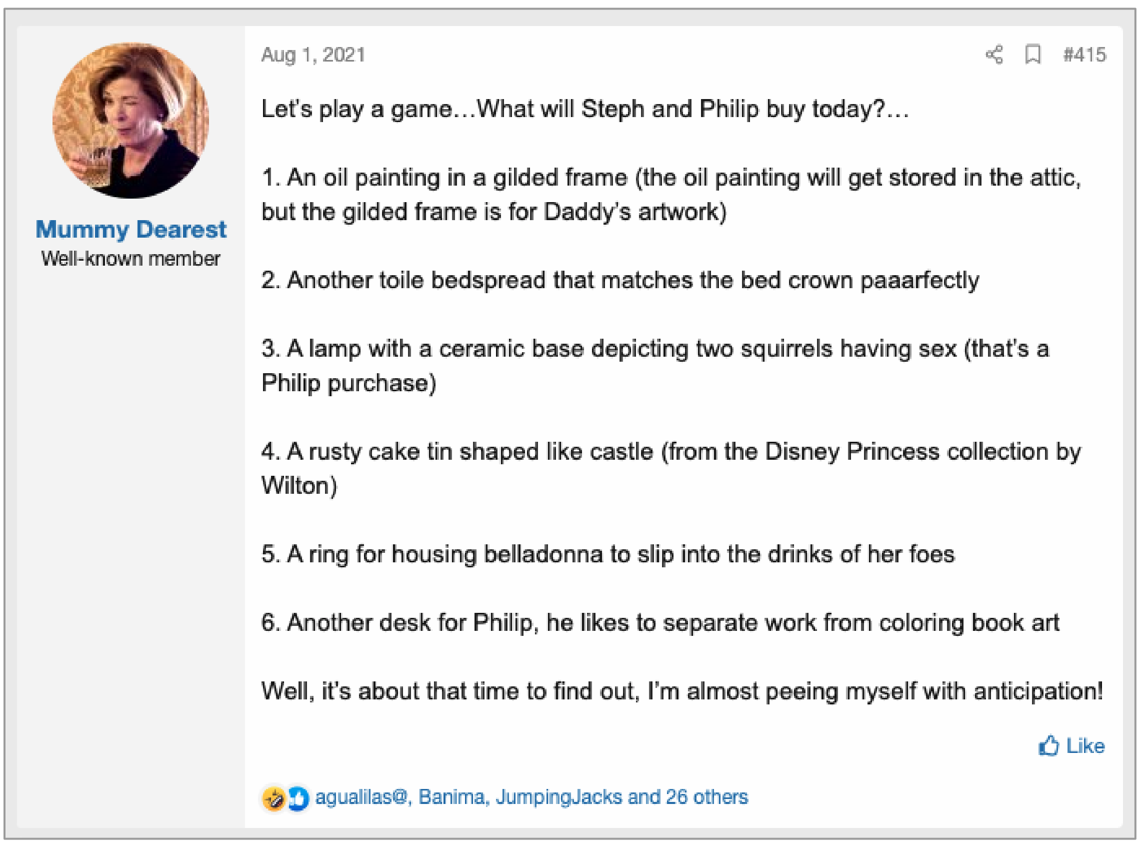
I TIP MY HAT TO YOU AND YOUR SOURCE, LADY WHISTLEDOWN @Clara Burnett

Last edited: Nov 3, 2021

Like

Bored Mermaid CC, agualilas@, Camembert and 44 others

Tattle Excerpted Images: Imagineering



Mummy Dearest
Well-known member

Aug 1, 2021 #415

Let's play a game…What will Steph and Philip buy today?…

1. An oil painting in a gilded frame (the oil painting will get stored in the attic, but the gilded frame is for Daddy's artwork)

2. Another toile bedspread that matches the bed crown paaarfectly

3. A lamp with a ceramic base depicting two squirrels having sex (that's a Philip purchase)

4. A rusty cake tin shaped like castle (from the Disney Princess collection by Wilton)

5. A ring for housing belladonna to slip into the drinks of her foes

6. Another desk for Philip, he likes to separate work from coloring book art

Well, it's about that time to find out, I'm almost peeing myself with anticipation!

Like

agualilas@, Banima, JumpingJacks and 26 others

The Mission of the School of Business

We empower students with the knowledge and values to lead, serve and succeed in their careers, communities and lives.

The Vision of the School of Business

To be the standard of educational excellence for a diverse learning community developing business minds for today and the future.

The Creed of the School of Business

Excellence in every interaction.

SIENA COLLEGE
School of Business
Siena Hall 301
515 Loudon Road
Loudonville, NY 12211-1462

(518) 783-2321
Email: cbuff@siena.edu
Fax: (518) 786-5040

Cover design by: Kathy Renaud, Office of Academic Affairs