Applications of Psychological Theories in Business and Politics

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The social and political use of psychology

Starting from around the beginning of the 20th century, numerous theories of dynamic psychology were developed to try to explain psychological problems, as well as "personality types," which relied on theories about how people think about themselves and the world.

From the earliest decades of the 20th century, business and political leaders sought to apply these theories to effect behavioral changes in customers and citizens. Economists and other social scientists also required some kind of theory of individuals for their analysis.

What we will see is that the theories changed considerably over time, but businesses and politicians were still able to use them to great effect. It is likely that the individuals studied – that is people themselves – also changed considerably over time.

Behaviorism

Following the psychology lab of Wilhelm Wundt, set up in Leipzig in 1879, psychologists in various countries began to study the metal processes of humans using mechanical apparatus to study sensory simulation and responses.

For example, John B. Watson in 1913 argued that the concept of consciousness should be excluded from psychology and that only *observed behavior* should be taken into consideration. The behaviorists studied animal models of conditioning and learning, based on biological drives, punishments and rewards, and so on. They argued that there was some analogy between these animal behaviors and human behavior.

In 1920, Watson left academia, because of an affair with a student, and went into the *advertising industry* on Madison Avenue, NY. The behaviorist approach offered the promise of controlling consumers.

Dynamic psychology

Dynamic psychology arose around the end of the 19th century, out of a background of practices of so-called *animal magnetism* and studies of *hypnosis*.

In the first decade of the 20th century, a number of physicians and psychiatrists began publishing theories of human psychology that involved descriptions of a *subconscious* or *unconscious mind*. They argued that there is a dynamic tension between the thoughts, ideas, and will of the conscious mind and the desires and impulses of the unconscious mind.

Dynamic psychology was articulated in a range of theories that attempted to describe the workings and failings of the human mind as a *dynamic system* with its own set of structures, principles and perhaps laws, that were not fundamentally determined by the physicality of human biological existence – or at least, could be articulated without reference to any neurological basis.

Sigmund Freud (1856–1939)
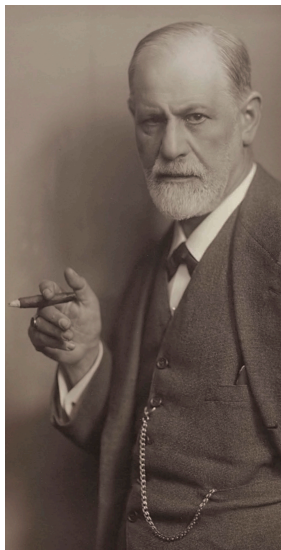
- Born to a middle class Jewish-Austrian family.
- Took a degree in neurology and spent 6 years studying brains and nerve tissue.
- Switched to medicine, took an MD, and worked at Vienna General Hospital, publishing on cocaine and aphasia (disfunction of language function).
- Started a private practice specializing in nervous disorders and developed *psychoanalysis*.
- His writings on dynamic psychology attracted a wide readership.
- Died in Britain a year after fleeing the Nazis.

Theories of unconscious

Freud developed the idea that psychological problems result from a conflict between the conscious mind and a substrate of hidden, or unconscious, drives and desires. For Freud, the unconscious was a murky region full of dark impulses, mostly driven by sexual desires that the mind was trying to suppress from consciousness – because of the uncomfortable nature of the impulses.

Other physicians and psychologists, such as Alfred Adler (1870–1937) and Carl Jung (1875–1961), attributed the unconscious drives to other things, such as family dynamics, problems of socialization, or archetypes from culture that exert some sort of narrative influence.

In all cases, however, the fundamental claim was that human beings are *not primarily rational*, but are rather driven by unknown forces that are *essentially emotional*, and are beyond the individual's control and even knowledge.

Reactions to the theory

From the 1920s to 60s, the ideas of dynamic psychology, and especially Freud's vision of the unconscious, exerted a profound influence on many areas of thought and culture:

- Freud's ideas were largely rejected by academic psychology.

- Psychoanalysis became a popular form of therapy in some counties, especially among the elite (the rich and famous, business people, politicians, artists, writers, and so on).

- A vague understanding of the role of hidden and unconscious drives in individuals and society captured the public imagination.

- Corporations and politicians used the concept of hidden drives as a way to manipulate people into doing what they wanted them to do. *There was apparently no need for a deep or falsifiable theory for this practice to be effective*.

Edward Bernays (1891–1995)

- Born in Vienna, Austria, he was S. Freud's double cousin.
- His family moved to the US in the 1890s, and he became a journalist, and press agent.
- He applied Freud's ideas of the unconscious to manipulate people's feelings about politicians, products, and companies.
- He became a pioneer of *propaganda*, *public relations*, and *advertising*.
- Books: *Crystallizing Public Opinion* (1923), *Propaganda* (1928), *Public Relations* (1945).

Propaganda

After the US entered WWI, Bernays was hired at the US Committee on Public Information (CPI) to build international support for the the US war effort, especially focusing on businesses operating in Latin America. Bernays was part of the team that promoted the idea of making the world "safe for Democracy" and casting Woodrow Wilson, who was actually an elitist and racist, as a sort of savior of democracy around the world. Bernays referred to this work as "psychological warfare."

When the war was over and Bernays was part of a group sent to the Paris Peace Conference, he was surprised to see how effective they had had been and that President Wilson was greeted as a hero. He announced the work of the CPI at that time was "to interpret the work of the Peace Conference by keeping up a worldwide propaganda to disseminate American accomplishments and ideals."

Armistice in Paris, American "Doughboys" and French civilians, Nov. 11, 1918

The theory and application of propaganda

In the interwar period, Bernays began to work in the private sector to change and manipulate the attitudes of the populace to meet various political and business goals. Out of this he developed a theory of propaganda, about which he published a book.

Bernays, *Propaganda*, 1938

"*The conscious and intelligent manipulation of the organized habits and opinions of the masses is an important element in democratic society. Those who manipulate this unseen mechanism of society constitute an invisible government which is the true ruling power of our country. We are governed, our minds are molded, our tastes formed, and our ideas suggested, largely by men we have never heard of… It is they who pull the wires that control the public mind.*"

Joseph Goebbels, the Nazi minister of propaganda, attributed many of his ideas to Bernays' work.

Public relations

Because the Nazis, and later USSR used the term "propaganda," it took on a pejorative connotation. Hence, Bernays rebranded it as "public relations" (PR), which he called "the engineering of consent." He developed tools "to control and regiment the masses according to our will without their knowing about it," by appealing to unconscious drives. He founded the Council on Public Relations with corporations, celebrities and politicians as clients.

- He developed focus groups, product placement, celebrity endorsements.
- He organized public happenings and invited reporters.
- Founded scientific studies and research groups.
- He developed fake news organizations.
- "Torches of freedom," soap sculpture contests for Ivory, convinced the public that only disposable cups were sanitary for Dixie, and so on.

"Torches of Freedom," 1929

- Bernays and his clients used focus groups to find out how women felt about smoking. The told him they felt that smoking was *masculine*, so he decided to associate smoking with women's liberation.
- They associated smoking with freedom and independence.
- They had socialites smoke in public and paid reporters to cover the "story."
- They placed smoking celebrities in movies.
- When they found out that women would not smoke Lucky Strikes because the package didn't match their clothes, they made green fashionable.

THE HEIGHT OF GOOD TASTE

Bernays' methods in the "torches of freedom"

Use of Symbols
: Attaching a certain product to certain cultural ideas or movements, so that the product would become a symbol for that culture. (Feminism, rebellion, slimness and youth, health, wealth, etc.)

Appeal to hidden desires
: Product placement and happenings with models and celebrities smoking associated smoking with the desires of regular women to be free independent, healthy, well-to-do, attractive, and so on.

Normalize behavior
: He arranged for socialites to be photographed smoking by the press. He paid movie studios to include scenes in which women smoked in public.

Permeate public mentality
: His products and clients appeared in the media: newspapers, magazines, movies, etc.

Kahneman and Tversky

Around 1970, Daniel Kahneman (1934–) and Amos Tversky (1937–1996), both Israeli psychologists, began a close friendship and collaboration that was to last for some 15 years. They applied experimental techniques to cognitive psychology, studying how people think, the sorts of errors they make, and their emotional responses.

Over the next decades, this lead to a revolution in psychology which had profound effects on many areas of the social and health sciences, such as economics, political science, medicine, public heath, and public policy.

Overview of the new psychology

Starting in the 1970s Kahneman and Tversky, along with their colleagues studied the errors of judgment that people tend to make. They focused mostly on undergraduate students, but they also studied children and adults, including expert practitioners.

Eventually, they postulated that there are two types of mental processes at work, System 1 and System 2. System 1 is rapid, often unconscious, emotional, and makes decisions using a number of different shortcuts, or heuristics. System 2 is slow, deliberate, computational, and takes a lot of work. Using System 2 requires a lot of practice, and cannot be done all the time.

Whether or not these systems are simply explanatory models or have some basis in the structure and function of the brain has not yet been fully determined. It is currently thought that System 1 may be related to evolutionarily prior regions of the brain.

Law of small numbers

- We will always find that purely random effects are stronger in small sample sizes, but we make up *causal explanations*.
  - The best test scores are all from small schools, the highest cancer rates are all from rural communities, athletes have "hot" streaks, sex-ratio imbalances are greater in small hospitals than in large ones, etc.
- We have a hard time understanding how randomness works in small samples. Example, what is the chance of getting *exactly* the following runs of birth orders: GGGBBB, GGGGGG, GBGGBG?
- Because we have weak intuition for these random effects, we jump to conclusions and create false narratives to "explain" what is going on.

Memory-availability bias

- We have a tendency to substitute the ease with which we can remember something, or think of an instance, with the overall size of its frequency.
  - We often believe that celebrities have more divorces or drug charges than regular people; we exaggerate the relative danger of flying after news of a crash; we rely on our own experience in thinking about the frequency of certain events; we tend to over-emphasize our own contributions to joint projects; we usually overstate the frequency of events that leave a strong emotional impact (accidents and natural disasters vs. disease).

- If we have to list – that is, remember – a large number of things, we are likely to think that the class of things is rarer than it actually is, and the contrary.

- If we have few experiences of a certain place, type of experience, language, culture, and so on, we are more likely to form memory-availability bias.

An example

Ken's concentration (an imaginary SILS student)

"Ken has high intelligence, although lacking in originality and creativity. He has a great need for orderliness and clarity, and for neat and tidy systems in which every detail is appropriately situated. His writing is dull and mechanical, occasionally enlivened by corny puns, gags, and sci-fi allusions. He has a strong drive for competence. He seems to have little feeling and little sympathy for other people, and does not enjoy interacting with others. Self-centered, he nonetheless has a deep moral sense."

If Ken is planning to complete a concentration at SILS, what is the most likely concentration that he will be enrolled in:

1. Literature   2. Mathematical sciences

Details and stereotypes

- We have a strong tendency to be distracted by stereotypes from thinking about the overall statistical likelihood.
- This is exasperated when details are filled in, distracting us from the big picture.
    - Mary is single, out-spoken and very bright. She majored in gender studies. She is deeply concerned with social justice and participated in women's rights marches. Is she more likely a (1) bank teller, or a (2) bank teller and feminist?
- We tend to develop a representative picture in our mind, and this distracts us from the *base rate*.
- In order to think about these questions accurately, we need some understanding of base rates and even Bayes' Theorem.

$$P(A|B) = P(B|A)P(A)/P(B)$$

$P(A|B)$ is the conditional probability, $P(B|A)$ is the accuracy of the assay, $P(A)$ and $P(B)$ are the base rates.

Regression to the mean

- **Regression to the mean** is a *statistical fact* related to imperfect correlation.
  - The children of very tall parents tend to be shorter, and the contrary; the best (or worst) performances tend to be followed by lesser (or better) performances; the spouses of very intelligent (or stupid) people tend to be dumber (or smarter); a depressed (or ill) person who is treated with *anything* will tend to improve, and so on.
- We have a strong tendency to make up – that is, to imagine – causal explanations for this purely statistical fact.

There are mathematical equations that can help us understand these relations, but a simple rubric is the following:

$$\text{sucess} = \text{talent} + \text{luck},$$

$$\text{great sucess} = \text{a bit more talent} + \text{a lot more luck}$$

In-group and out-group biases

- In studies with small children, one finds that if they are randomly assigned to a group – for example by rolling a die and then putting on a shirt – they will almost immediately become biased in favor of members of their own group.
  - They will interpret ambiguous images of in-group and out-group individuals with causal stories favorable to members of their own group.
  - They will divide up rewards more favorably with members of their own group.
  - They will distribute punishments more unfavorably towards members of the other group.
  - They will make up stories that justify this behavior in terms of causal explanations.
  - They will then later use these fabricated stories as "evidence" in support of their bias.
- Adults also show in-group and out-group biases, although less pronounced.

Errors of the conscious mind

- Unlike the claims of the early 20th century dynamic psychology, the new psychology of the 1970s and 80s focused on the *errors of the conscious mind*.
- The experiments were carried out on intelligent, well-educated people, and the errors were found to be consistent.
- It was very difficult for most people to believe, however, that these findings could have serious real-world implications.
- In fact, *when you learn about these errors, you will believe that they are interesting facts about the world that apply to other people, but you will not see them as applying to you*. For most of you, they will not change your understanding of yourself or of the world.

Neoliberal economics

The classical liberal economists, like Adam Smith, argued that the market would self-stabilize and produce wealth through vague fantasies, such as the effect of an "invisible hand." The market collapses of the 1920s cast doubt on these ideas.

In the 1940s and 50s, mathematicians began to apply game theory to economics. John von Neumann and Oskar Morgenstern wrote a classic text on *The Theory of Games and Economic Behavior*, 1944. In 1950, John Nash produced an equilibrium equation for non-cooperative games. These theories assume *zero-sum* games, *rational* players, and often *perfect information*.

In the 1970s, neoliberal economists, centered around University of Chicago and Milton Friedman, began to argue for liberal approaches to economics, now supported by these new mathematical models. They became influential in the US, Britain, and many other countries.

Neoliberal conservatives

The international economic situation of the 1980s was heavily influenced by neoliberal policies, lead by Margaret Thatcher (gov. 1979–1990), in Britain, and Ronald Reagan (gov. 1981–1989), in the US. Although Thatcher and Reagan pursued neoliberal policies such as deregulation, promoting free-trade, cutting taxes, and reducing government interference in the market, they achieved electoral success through *psychological techniques*.

Stanford Research Institute (SRI) used psychological studies to sort people into 12 "personality types." They discovered that there was a large group of voters, called "inner directeds," that would respond to a message of *individualism* irregardless of age, gender, class, race, and so on. Thatcher and Reagan directed their campaigns to these voters and did not discuss policy at all. They ran on an ideology of the *importance of the individual*.

Neoliberal liberals

Throughout the 80s, the economies of North America and Europe were revised by marketing shorts runs of products to people based on their personality types. Political focus groups began to discover that voters also saw themselves as consumers who could make demands on politicians based on the taxes that they paid.

The parties on the left came back into power in the 90s. First Bill Clinton (gov. 1997–2001), in the US, and then Tony Blair (gov. 1994–2007), in Britain. In both cases, they uses focus groups to test every aspect of their campaigns with groups that were identified as so-called "swing voters" because of their personality types. They also used these focus groups to decide on campaign promises, often offering different, and sometimes contradictory, messages to different groups with different psychological profiles within the "swing voters." They focused all their attention on the swing voters, and ignored the majority of their bases.

## Electoral politics and identity groups

In the 1994 midterm elections in the US, the Republicans took the House of Representatives for the first time in decades. They used *big data processing* to analyze where their likely voters lived, and psychological techniques to activate them. They discovered that an effective way to increase voter turn out was to tell people that voter registration records are open, so that that their neighbors could find out whether they had voted or not. This psychological *social pressure* was much more effective than policy arguments.

When Clinton had to run again in 1996, he used *focus groups* to shape both his promises, and then later his governing policies. These were often small, essentially irrelevant things – adding chips in TVs to censor certain content, putting phones in school busses, requiring school uniforms. Because policies were decided by "8 people in the suburbs drinking wine," they were often contradictory.

Behavioral economics

- Already in the 1970s, a number of economists, such as Richard Thaler and Robert Schiller, began to take the new psychology seriously and to question many tenants of standard economics. But for decades they were considered fringe theorists.
- Behavioral economics starts by challenging the idea that the economy is made up of agents (individuals and institutions) who try to *rationally optimize* their actions in a market that "naturally" tends towards equilibrium.
    - Most people cannot and will not solve optimization problems.
    - The beliefs upon which people make their choices are biased and prone to error – not occasionally, but *mostly*.
    - There are many things that people actually do in making decisions that are contrary to economic optimization – that are driven by emotional states and conditions.
- Behavioral economics develops its ideas based on psychological models of humans as described by the new psychology.

Nudge
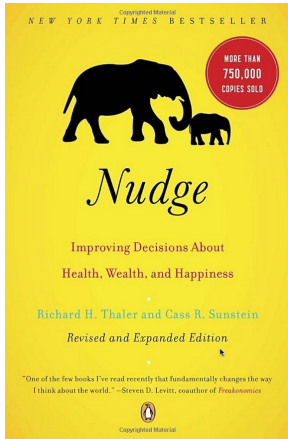
- Thaler and Sunstein published *Nudge* in 2009.
- They argue that since we usually make choices that are bad for both ourselves and society, policy makers should use psychology to create different incentives.
- This book was a best seller and served to popularize both the new psychology, and the new economics that developed from it.
- It was widely read by political leaders from many different countries and political systems: US, Britain, Canada, China, Germany, Qatar, and others.

Social media politics

More recent elections in the Britian and the US have been strongly determined by a combination of new technologies, data analysis, and psychometric techniques.

- Unclear whether policy or technique was the deciding factor.

Barack Obama's (gov. 2009–2017) campaign's pioneered the use of social media to generate interest in the campaign and broke small-donor fundraising records. They used *psychometric techniques* to target potential voters, and did door-to-door election drives with focused messages.

Donald Trump's (gov. 2017–2021) campaign again pioneered new social media techniques, and again broke small-donor fundraising records. They used Facebook and Twitter to target advertisements to certain *psychological profiles* to try to increase voter turnout amongst their supporters, and more importantly suppress turnout amongst their opponents.

Cambridge Analytica

Cambridge Analytica (CA) was a "global election management agency" that specialized in using big data and data analytics to advice political candidates on how to win elections. In particular, they acquired the personal Facebook data of some 87m users. They then used *psychometric techniques* to categorize these psychological profiles, and they used Facebook ads to influence the emotions and behaviors of these users.

CA was involved in some 200 elections in countries all over the world: Australia, Brazil, India, Indonesia, Kenya, Malaysia, Malta, Mexico, Pakistan, Thailand, United Kingdom, United States and others. Most famously, CA was involved in the Brexit vote in Britain and the election of Donald Trump in the US. After Trump's election the discovery of CA's, and Facebook's, involvement, and the realization of the ease with which it had been done, lead to a scandal and public outcry. The company closed operations in 2018.

Gamification

- Anyone who has ever played computer games has felt first-hand the sorts of techniques that are used in behavioral psychology – we feel compelled to engage the game and to pursue *pointless goals*. This is effect is much stronger if we believe that others are also aware of our progress.
  - Point systems, badges and achievements, progress bars, virtual currency, leaderboards, in-groups and out-groups (real or virtual), and so on.
- Gamification is the use of similar design strategies to drive behavior in various areas of human activity. This relies on the same types of strategies found in *Nudge*:
  - to drive customer engagement with brands,
  - to motivate people to pursue certain health goals,
  - to motivate employee productivity in the workplace.
- Gamification is used in "croudsource" tasks: Foldit to deduce protein folding, generating metadata for images to be used by AI image generators such as DALL · E 2, Stable Diffusion; training LLMs, etc.

Social credit systems in China

- There are a number of different social credit systems in China.
- The governmental system went into development in 2009, and was introduced in 2014.
- The Ant Group Sesame Credit System was a private system introduced in 2014. The Tencent system was introduced in 2019.
- A number of high ranking members of the Chinese government acknowledged being influenced by *Nudge* in developing their Social Credit System (社会信用体系).
- All of these systems use big data sets, AI, and gamification to analyze and control the users. The government system also has access to data from the mass surveillance systems installed all over the country.

Sesame Credit (芝麻信用)

- The Sesame Credit app was created by Ant Group in 2014. By 2019, it was used by over half a billion people.
- The core function was to serve as a credit system for grading repayment of debt and other financial functions in the modern debt-economy.
- It also uses gamification, however, to reinforce behaviors that Ant, and the government, regard as socially beneficial, and to discourage behavior that is regarded as *antisocial*.
- It collects data from social media interactions, shopping and traveling habits: payment history, financial ability, personal information, online behavior, interpersonal relationships.
- Credit scores are used to take out loans, but also to make purchases, realize savings, and so on.
- The stated goal of the system is to build "trust."

Screenshots of the Sesame Credit app

Replication crisis

- Starting from around 2010, there began to be a growing concern about certain ways of collecting, analyzing and reporting data that were being used to produce results in psychology, medicine, and economics. *A number of prominent findings could not be reproduced*.
- It was observed that positive, and unusual, results were favored by a "publication bias."
- A number of projects were founded specifically to try to reproduce significant studies. In one meta-study, fewer than half of the tested studies could be reproduced.
- There are number of reasons for the *representation crisis*:
  - Individuals have incentives to publish questionable work.
  - The quality of science collapses when it becomes a commodity.
  - The scientific coding of *true/false* gets confused with that of *profit/loss* and *news/not-news*, which come from the market or media.

Interactive and indifferent kinds

- Ian Hacking has argued that some kinds of things are indifferent to being studied (like electrons, planets, molecules, etc.), some kinds of things are interactive with the theories of those who study them (like economic markets, national laws, children, etc.), and some things are both.
    - Indifferent kinds are indifferent to any discourse about them. They may react to the way we intervene or measure (such as microbes, or photons), but they do not react to classifications and discourses.
    - Interactive kinds, being composed of human actors, are influenced, perhaps even coerced, by the discourses about them. We are affected by the way we are conceived of and described, both by ourselves and by the networks in which we live.
- It is clear that all of the individuals, institutions, and social groups discussed in this talk are interactive kinds – they change over time, and they do so in an interactive loop with the theories that are advanced about them

Overview

- We have looked at the development of different aspects of dynamic psychology – the first purely descriptive, the second more experimental.
- These led to the realization of number of features of human thinking that is irrational, and highly emotional.
- We have seen how these discoveries have been used to manipulate and control people by businesses, advertisers, and political leaders.
- We have also discussed the fact that many studies in psychology are *irreproducible*, perhaps as a result of the theoretical concepts and the subjects studied interacting.
- Once again, we see that the subjects involved in psychology and behavioral economics – people, businesses, economic regulators, market makers, and so on – are interactive kinds, so that the change as the theories about them change.