

## A THEORETICAL INSIGHT OF THE NOVEL HUMAN CRISIS OUTBREAK AND THE STOCKPILING FOOD PHENOMENON: HOME QUARANTINE, ETHICS, AND EGOISM

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Received date: 22 June 2022

Revised date: 12 July 2022

Accepted date: 02 August 2022

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### ABSTRACT

Typically, animals whose basic physiological needs are not provided and satisfied for any length of time do not survive. With the outbreak of the novel coronavirus pandemic, occurred the outbreak of stockpiling food. Previous studies showed that crisis changed the purchasing behavior of folks. However, none of them investigated the change observed in food purchasing behavior after the announcement of forced home quarantines, shutdowns of businesses and services. The objective of this paper was to gain new theoretical insights by providing an accessible overview of theories to understand this phenomenon. Moreover, this paper shed light on this topic from an ethical perspective. The approach we used was interpretivism. We treated the experience of stockpiling food as unique. The theories viewed in this study provided for the first time an insightful work and explanation about purchasing behavior during pandemics.

**KEYWORDS:** Ethics, home quarantine, novel coronavirus outbreak, stockpiling food.

### BACKGROUND

Coronavirus has caused two large scale pandemics in the last two decades: the severe acute respiratory syndrome coronavirus (SARS-CoV) (Peiris et al. 2004) and the middle-east respiratory syndrome coronavirus (MERS-CoV) (Zhou et al. 2020; Zaki et al. 2012). The 2019 novel coronavirus (2019-nCoV) is now the new pandemic and it is getting more and more attention over the time since 29 December 2019 (WHO 2020). It has been declared as Public Health Emergency of International Concern by the World Health Organization WHO (WHO 2019-2020).

Governments ordered citizens for self-quarantine and also ordered the city's bars and restaurants to close for all but takeout and delivery. Many people already knew the importance of self-isolation, stayed indoors and worked from home, hoping that early social distancing would speed their city's return to normality.

One group that is possibly busier than ever are the employees of the city's grocery stores, one of the few types of businesses that remained open. At grocery stores and supermarkets across the city, many shoppers have

filled their trolleys, anxiously provisioning for weeks and very few simply were doing their normal routines.

Studying how consumers make purchase quantity decision has a long tradition in the marketing science field. Dating back at least to the work of (Ehrenberg 1959), many researchers have modeled the quantity purchased within particular time intervals (e.g., Massy 1970). However, studies of food stockpiling behavior, or the number of food units purchased on a single purchase occasion, are more recent, also play an important role in modern marketing analysis.

In light of this depth of study, it is perhaps surprising to note that a review of the existing literature showed that very little is known about the theories explaining the behavioral process which underlies observed patterns of stockpiling during pandemics. To get to the foundation of this work, psychology and many theories were fundamental to the proceeding.

Maslow used psychology to analyze human needs and placed them into tiers or a hierarchy (S. Cooney, personal communication). Maslow's theory was used in this paper in analyzing and explaining the urge behavior of stockpiling food when the governments announced the

necessity of home quarantine and social distancing in order to halt the spread of the 2019 novel coronavirus.

Given the interdisciplinary nature of this research, it was appropriate for us to also consider additional relevant theories from some different disciplines which resulted in the development of the following four sections to better understand why do humans act the way they do (e.g., over buying and stockpiling food during the 2019-nCoV pandemic).

The first section was an analysis of the application of Maslow's Hierarchy of Needs and the social theory of Pierre Bourdieu into panic purchasing and stockpiling foods by citizens. The researcher built these theories to discuss different aspects of self-preservation during a global pandemic.

The second section was about psychological and ethical egoism theories.

In the third section, based on ethical intention, utilitarianism, deontology, rational egoism theory, and social solidarity, we provided some suggestions to manage this crisis of stockpiling food.

The epistemological orientation we used to study the consumer behavior with a view of understanding overconsumption and the interpretation of such behavior was the interpretivism philosophy (Orlikowski and Baroudi, 1991).

Thus, given the nature of this research, we aimed to investigate, identify and to explain the observable human exaggerated purchasing behavior during the latest pandemic crisis. The author considered great and relevant theories to delve into what was accomplished.

The selection of the different theories depended on their appropriateness, their high level of importance, their ease of application, and certainly their explanatory power.

## THEORETICAL INSIGHTS

### Needs theories

The development of needs theories reached its apex between the 1930s and mid. 70s. The apex of these theories was provided by the work of Allport (1937), Maslow (1943, 1954), Herzberg (1959), Alderfer (1972), Lowry and Maslow (1979), James (1890), etc. who were the groundbreaking of the hierarchical structure of psychological needs (Alderfer 1972).

Maslow, in particular, developed his 5 stages (or levels) hierarchy needs model which has become so popular that even after his death in 1971 he is attributed to the 7 stages and 8 stages versions of the same model but developed by others (Lowry and Maslow, 1979).

The 40 year period of research led to many adjusted or new needs models that have been applied in many other

fields including marketing, management (Kiel 1999; Huitt 2001), human resources (Cullen 2001), consumer behavior (Kotler and Keller, 2006), etc. Since then, interest has slowly switched to either investigating the exploitation of needs theories or explaining how individuals define needs and subsequently transform them into goals, behavior and, decision.

In the following, we provide an overview of needs theories in the context of consumerism during the pandemic phase.

### Maslow's hierarchy of needs

According to the theory, lower-order (physiological and safety) needs must be met most urgently, which might explain people's urge behavior to over purchase and stockpile food during pandemics. Maslow argued that the presence of lower-order needs are not motivators in themselves, but act as de-motivating influences if they are not present (S. Cooney, personal communication). This theory, explains the urge of people to fulfill their physiological needs certainly (e.g., food) in the quarantine phase before proceeding to fulfill the next. The need to fulfill such needs will become stronger the longer the duration they are denied, the longer the duration of the quarantine phase, the more people will purchase higher quantities of food. Thus, people bought as much as possible food and stockpiled them to prevent that their basic needs be unmet during the quarantine phase. The following is also a support for this explanation.

Individuals, as human beings, have always searched for the satisfaction of their basic survival needs, including food, water, and shelter (Wynn and Coolidge, 2004; Wynn and Coolidge, 2008). These needs are inborn and warranted by our bodies to sustain life rather than just improve it. One could address these needs at a primitive level since they do not actually form a construct dependent on our peers or external social factors i.e. they are both cognitive and physiological in nature. Indeed, recent researches into mathematics and cognitive psychology (Lakoff, G. & Núñez, R.E., 2002) have shown that a newly born is capable of 'counting' up to 3 objects even without knowledge of basic arithmetic. Similarly, our body has the ability to recognize the needs of warmth and nutrition.

William James (1890) was the first to anticipate the model that was later proposed by Maslow. In his discussion on consciousness, he described the different constituents of the empirical self on a hierarchical scale, with the body placed at the bottom and the spirit at the top, and the extra-corporeal material and social selves between... according to their worth. While the body represented the heart of the material self, clothes, family, home and possessions came immediately after as parts of human beings' life (Ward and Lasen, 2009).

### The social theory of Pierre Bourdieu

Pierre Bourdieu (1998) offered social theory as a new approach and an alternative to the theory of Maslow. This new approach was the foundation for a social critique of consumerism and an alternative evolutionary theory of consumption. It provided the structure of the social hierarchy. It constrained the consumption of lower social strata and led to subtle, less conspicuous consumption patterns at the top of the social hierarchy: a scenario that could provide a social foundation to the Engel curve. Engel's curve and subsequent law was formulated nearly 150 years ago and stated that with rising incomes, the share of expenditures for food products (and, by extension, other things as well) declined. This law was brought forward at a time when agriculture was slowly being taken over by industry, hence the curiosity in investigating income effects on food. Engel showed that as a country developed economically, the relative importance of agriculture declined. He suggested an anti-proportional explanation for this behavior. The fundamental reason was that as incomes increased the proportion of income spent on food declined and money was spent on higher needs such as esteem, self-actualization. Engel also found, based on surveys of family budgets and expenditure patterns, that the income elasticity of demand for food was relatively low (Daniels 2001). We note that Engel's Law does NOT advocate that the consumption of food products remains unchanged as income increased!, rather it suggested that consumers increased their expenditures for foodstuffs (in % terms) less than their increases in income (Ward and Lasen, 2009).

However, Engel's Law did not take into account abnormal situations such as wars, pandemics, or quarantines where people were forced to stay at their homes for a long period of time without having a daily access to groceries. The 2019-CoV pandemic, which was considered as the World War III, might restrict the application of Engel's Law to peace phases. In wars and pandemics, people seek to firstly satisfy their basic needs (food) and thus strive to over purchase and stockpile foods.

The latest public health crisis in this tumultuous time of the outbreak of novel coronavirus was associated not only with healthcare issues and food availability, but also with ethical issues. Is it selfish and immoral to strip the supermarket shelves of canned food for example- or is stockpiling groceries a sensible and cautious way to protect yourself and your family? The ethical theories might answer these questions.

### Ethical theories

The choice of ethical theories was because they fit in line with every level achieved in the pyramid of Maslow's Hierarchy of needs. The author examined how ethics explain the behavior of a person at the first level of Maslow's Hierarchy of needs during pandemics. How a person at this level might feel and act to make an ethical

and considered response regarding food purchasing and stockpiling during a global pandemic (<https://www.stuff.co.nz/national/health/coronavirus/120345912/coronavirus-it-is-immoral-to-stockpile-food>)

The author discussed and relied on the theories of psychological egoism and ethical egoism to better understand from an ethical perspective humans' stockpiling behavior to fulfill their physiological needs (McConnell 1978).

### Teleology, ethical and psychological egoism theories

One presentation of ethical egoism suggested that an act is ethical when it boots the individual's long-term interests. Another presentation focused on short-term hedonism.

Normatively, a consumer should make purchase decisions by defining a series of reservation prices that define how many buying-periods' supply should be held given an observed price. However, there is a level over and above that with quarantine announcements. Regardless of the prices, people bought huge quantities of food for maybe more than six months, for the apocalypse and engaged in food stockpiling without thinking about other people's needs, about the rest of the community.

In psychological egoism, each person is driven by his own advantage and good and always only seeks his best interest. Human nature claimed that no one can perform any act unless it is in his best interest (McConnell 1978) because he or she is psychologically programmed to behave only in their self-interest (Reidenbach and Robin, 1990). In psychological egoism, the behavior of people does in fact only promote their own interests. Surely, though, it is odd to demand a person to do what he cannot help but do. In such cases, the moral theory will guide human behavior, to direct people to do acts that are judged to be right according to the system and to avoid those acts that are wrong. This is the concept of ethical egoism. It explained how people ought to behave (McConnell 1978).

If only the theory of psychological egoism was true, thus, any other ethical theory such as ethical egoism is superfluous in guiding the behavior of human beings because a person is unable to avoid doing what he ought to do. Therefore, each person is at every moment acting in a morally perfect way. But, no one is perfect, and in a theory where no one can ever do anything wrong cannot be accepted and must be rejected. So, in contrast to what many have held, psychological egoism and ethical egoism theories do not support each other's, because if they were both jointly maintained, then one is led to the absurdity (McConnell 1978).

Although it is true from a psychological egoism perspective that people always seek their own good, however they actually always do what they believe is in

their best interests with sometimes being mistaken and misjudging what will maximize their own good. Ethical egoism cautions people to examine their beliefs about what is really in their best interests. People should be aware not to sacrifice their long-range good for some short-range goal (McConnell 1978).

Therefore, egoism using long-term interests was taken more seriously by modern philosophers. In this presentation, it was possible for a person to help others. Help followed the rules of society and even gave gifts when that person feels that those actions are in his or her best interests (Reidenbach and Robin, 1990). So, critically, people can do wrong acts, even if psychological egoism and ethical egoism are both true (McConnell 1978).

### **Basic Philosophical Principles For A Preparative Management Guide For Pandemic Crisis**

#### **Ethical intention theory**

A person must take a decision about what is ethically correct which relies on making an ethical predisposition, based on his or her ethical identity process in order to decide what to do later (Rest 1986). In fact, an ethical judgment is not the same as a decision to act on that judgment that is to establish ethical intent (Jones 1991). The terms intent and intentions were found in some of the social psychology literature and functionally equivalent (e.g. Fishbein and Ajzen, 1975). Generally speaking, whenever the intention is stronger to carry out behavior, the more is the likelihood of occurrence of that particular behavior and vice versa (Conner and Armitage, 1998).

Based on ethical intention, citizens might have the intention to carry out the behavior of thinking not only about satisfying only their own needs but also the needs of the others. At this stage, a person should also give privilege to ethical factors against other factors, notably the self-interest (Hunt and Vitell, 1986).

#### **Teleology-utilitarianism**

In the 19<sup>th</sup> century, Jeremy Bentham (Harrison and Bentham, 2005; Kirkpatrick 1989) and John Stuart Mill had the idea of hedonism and utilitarianism (Skorupski and Mill, 2005; Kirkpatrick 1989) which was the creed that adopted as the basis of morals, the greatest happiness principle. It was based on one's ability to predict the consequences of an action. (Mack 2004).

Utilitarianism strain was the teleological theory stating that individuals should act so to produce the most excellent possible ratio of good to evil for all society. It forced the actors to consider all of the outcomes of their action or interaction and to weigh one against another to determine which is best for society. Since one activity is compared to another, utilitarianism promoted efficiency. A less efficient action may produce less utility than a more efficient action, and is, therefore, less ethical. Also, the general public learned about the ideas of

utilitarianism through the concept of a democratic process that focused on majority rule.

Many opponents criticized utilitarianism strain. There were two most important arguments against utilitarianism. The first one was that it is possible to project and measure the consequences of many essential actions. The second one was that important harms to individuals or small groups can be averaged with modest gains to a large number and appeared to be acceptable. The first complaint was considered less troublesome because individuals were constantly making important decisions with less than perfect information. The second complaint had caused an important issue for the theory, and even though it still has a large following among philosophers. The theory had lost some stature because of its failure to deal with the complaints (Reidenbach and Robin, 1990).

#### **Deontology**

Immanuel Kant had the idea of the deontological class of ethical theories, the Judeo-Christian ethics and altruism and hence this concept was widely referred to as Kantian deontology (Kirkpatrick 1989). In contrast to the utilitarian concept, deontology was ethics of duty where the morality of action depended on the nature of the action; harm was unacceptable irrespective of its consequences. People must adhere to their obligations and duties when engaged in making a decision when ethics were in play. A decision made based on deontology thinking may provide appropriate outcome or consequence for an individual but not necessarily for the society (Mandal et al. 2016).

These duties to others are numerous and diverse. Under this philosophy, we must pay our debts, care for our children, and tell the truth because it is the "right" thing to do. One of the most popular formulations says, "I ought never to act except in such a way that I can also will that my maxim should become a universal law." This rule and the use of logic helped in evaluating and determining any action if it is ethical or unethical. These duties on the part of one individual toward another engendered rights for the other.

Deontology theory may be the most preferred ethical philosophy today, but it also was criticized. The most important complaint was that, whatever rule might be constructed, exceptions can almost always be found to be necessary. When applying logic, most people would agree that the act of lying is unethical. However, in some situations, lying seemed to be the most ethical thing to do. Ross (1930) gave one solution to this issue. He suggested that the rules created are prima facie and that we should recognize exception.

The contemporary American philosopher John Rawls, for example, developed an account of justice. It had roots in Locke, Rousseau, and Kant. The guiding idea supporting this account was the social contract: "Every



rational person must act as if he, by his maxims, were at all times a legislative member in the universal realm of ends." In this formula, Kant used the conception of the social contract found in Jean-Jacques Rousseau (1712-1778), although he interpreted it in his distinctive way.

The most important was to learn right now from any other analogous experience in the past. This paper investigated what was done before but it showed that the previous efforts were not sufficient to improve pandemic preparedness. People should be informed about how to act and behave in a pandemic situation and to learn from previous pandemics like influenza to avoid behaving in a selfish and immoral way.

Community update planning for responding to an infectious disease outbreak should focus on being prepared as much as possible in a fast and effective public health response. The use of community mitigation measures will slow the spread of unnecessary stockpiling food.

### **Rational egoism theory**

While purchasing food was done in a frenzied, thoughtless, irrational manner, a human being doesn't have to be irrational to want to make sure he can self-isolate safely if he needs to. (<https://www.stuff.co.nz/national/health/coronavirus/120345912/coronavirus-it-is-immoral-to-stockpile-food>)

We draw on insights from the rational egoism theory to explain how purchasing food should be made ethically and in a fair and considered response during pandemics.

But, like all good ethical questions, there are a lot of grey areas. The public seems to split and there are the proponents as well as the opponents. Some people considered it a greed action while others considered it like a normal human preservation reaction - not greed.

One of the famous proponents of egoism is Ayn Rand (<https://plato.stanford.edu/entries/ayn-rand/>) who had the idea of objectivism, rational egoism, and laissez-faire capitalism. In the context of this theory, what made something good or bad, right or wrong, was that it satisfied one's desires, or meet one's needs. Its basic principle was the rational self-interest of the person doing the action (Lantos 1995).

Therefore, proponents of over-buying foods assumed that we should beware of judging the bloke with the full shopping trolley because some people may be doing it for good reason. Shoppers might have traveled in from a rural area, or have a very high level of anxiety. Moreover, proponents assumed that accusing people of hoarding was in conflict with the community spirit and reciprocity that will maintain the society together.

However, one of the ethical theorists claims that being a responsible citizen means sharing risk; and that means

the risk of running out of some things. Therefore, stockpiling is wrong, but condemning people with full supermarket trolleys is probably just as bad. In brief, anything up to a fortnight's supplies is fine. Anything beyond that led you into a moral minefield.

One of the suggestions was to assist those less fortunate to buy more provisions and make them reassess how much they actually need. Supermarkets could give buyers a clear indication of what product lines may be running short, so they can buy responsibly.

That relied on the theory of providing information to make people more aware and then being able to make rational decisions <https://www.stuff.co.nz/national/health/coronavirus/120345912/coronavirus-it-is-immoral-to-stockpile-food>.

During and after the novel coronavirus outbreak phases should be as a catalyst, an opportunity for "us to be our best selves". And again, to remember the key question: "If everyone does what I am about to do right now, does it end up depriving others of their basic needs?" We addressed this question differently in a creative way. If someone is dead set on stockpiling, at least he should do it gradually, so he doesn't disrupt the supply chain. But also he should consider whether he can build his stockpile by simply consuming less, all people, somehow, over-consume. Another solution was to plant winter vegetables like beetroot and broccoli or to set up some kind of shared communal stockpile, so at least it is shared efficiently.

The ability of consumers to make a rational purchase of quantities under imperfect knowledge about the global healthcare future situation should be quantitatively explored.

Nations which are net producers of food do not absolutely need to panic buy or stockpile. They are so lucky, so blessed, and their citizens should understand that there is plenty of food for everyone. But, since food is absolutely critical to the peace of human mind, the reason behind the chaos in the aisles is clarified by the idea that people are afraid and worry to see empty shelves. People want to have enough food in their fridge to feed their selves and their babies.

When shopping normally, the supply chain will keep up and the shelves will fill again. The communities are strong when they are together giving social solidarity a fundamental role during pandemics. In the following, we investigated the role of social solidarity. <https://www.stuff.co.nz/national/health/coronavirus/120345912/coronavirus-it-is-immoral-to-stockpile-food>.

### **Reinforcing the role of social solidarity**

Living in a deeply individualistic society, and that way of thinking and caring about each one's own personal

food security is corrosive to the cooperation needed during crises and pandemics.

Gambrel and Cianci (2003) indicated that past studies showed culture as influential in managerial decision-making and other practices where it might make collective efforts difficult.

But, the society is supposed to value the public good, and to bolster strong investments in public institutions, for the sake of making individuals reap real rewards in moments like pandemics. If the society doesn't hold common good in high regard, it doesn't have strong social bonds, then; crisis like this pandemic will be much harder for everyone. <https://www.vox.com/coronavirus-covid19/2020/3/18/21182063/coronavirus-covid-19-pandemic-social-distancing>

Each individual has to be part of the community, which means taking on the same risk as everyone else and to accept that he may be a little bit uncomfortable. <https://www.stuff.co.nz/national/health/coronavirus/120345912/coronavirus-it-is-immoral-to-stockpile-food>.

We suggested for each country to have its Food and Grocery Council (FGC) to plan for such pandemic scenario and to advance plans in place, as in Australia (Russell Neal, AFGC, Canberra, ACT, personal communication) (Haug, A. et., al, 2007).

Numerous pandemic planning recommendations were published. However, no or little specific guidance about the types and quantities of items of supplies needed has been available (Radonovich, L.J., et al., 2009). Food supplies in the home of citizens will need to last as long as it takes for the development of a convenient vaccine, its production, and its availability on the market. Traditionally, there was a lag of 6 months or more since the discovery of a new vaccine to protect against the virus until it was available for distribution. While it is the responsibility of the government to procure long-term food stockpiling, we suggested that home stockpiling of food to last about 3 months might be done by individual households. This would give governments a window of time to put emergency action plans and food deliveries in place (Haug et al. 2007). Logically, foods to stockpile should be staples and well accepted, non-perishable, easy to store in an airtight container in a cool, dry place to maintain the quality, have long shelf lives, packed where possible in an inert gas, healthy, and nutritious providing for all members of the family the recommended daily energy covered by macronutrients and micronutrients. A food stockpile should provide an average energy intake of about 9MJ (2150 kcal) per person per day in order to avoid significant weight loss ([http://www.nhmrc.gov.au/publications/synopses/\\_files/n35.pdf](http://www.nhmrc.gov.au/publications/synopses/_files/n35.pdf)).

Nations should be well prepared in case of a pandemic event or any other catastrophe by providing food and

nutrition guidelines for survival rations (Haug et al. 2007). Moreover, the national Government Department of Health and Ageing ([http://www.nhmrc.gov.au/publications/synopses/\\_files/n35.pdf](http://www.nhmrc.gov.au/publications/synopses/_files/n35.pdf)) like in Australia should recommend daily intake of specific macronutrients and micronutrients for adults and children and to publish it. That will be a source making it possible to compose diets with the appropriate quantity of nutrients and avoiding the unnecessary purchase of foods. As most people have no access to detailed nutrient data, it is important to develop examples to show what is needed and possible as food combinations. In some countries, most people have adequate money and storage space to build up their own store of food. For those who do not, state and local governments should consider a plan to construct food stockpiles across the country to reassure their citizens (Duerr et al. 2007). Further suggestions, recipes and guidelines should be formulated to prevent the repetition of such future unnecessary over purchasing behavior.

## CONCLUSION

The theories viewed in this study provided for the first time an insightful work and explanation about over purchasing behavior during pandemics. The author relied on theories from some different disciplines where she analyzed Maslow's Hierarchy of Needs and the social theory of Pierre Bourdieu to understand the panic purchasing behavior and stockpiling foods by citizens. The researcher built these theories to discuss different aspects of self-preservation during the latest global pandemic. Psychological and ethical egoism theories helped in this investigation. Over purchasing food during pandemics is in order to fulfill the Human physiological needs. Moreover, ethical intention, utilitarianism, deontology, rational egoism theory, and social solidarity, were the theoretical foundation to provide some practical suggestions to manage this crisis of stockpiling food during the 2019 coronavirus pandemic as well as future pandemics.

Therefore, this research paper served as one of the first humble steps to merge this paper with the previous literature and to add knowledge to it.

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