PhD Programme in Economics
of the Tuscan Universities
University of Florence | University of Siena | University of Pisa

# Three essays on consumption


Author:

**Filippo Pietrini**

Università degli Studi di Siena, Department of Economics and Statistics

Supervisor:

**Marco Luigi Enrico Guidi**

University of Pisa


A thesis submitted in fulfillment of the requirements for the degree of
Doctor of Philosophy in Economics.
SECS-P/01 and SPS/08
XIV Cycle
Coordinator: Simone D'Alessandro

**Date of defense:** July 2022

e/ENSLyon.jpg

*Three essays on consumption*

Author:
Filippo Pietrini (Università degli Studi di Siena, Department of Economics and Statistics)

Supervisor:
Marco Luigi Enrico Guidi (University of Pisa)

# Part I

# Acknowledgements

I thank my supervisor for the help and humanity shown to me, all the professors I spoke with, the referees of various meetings and the friends who helped me develop the ideas of this research.

# Part II

# Introduction

The common thread running through these three chapters is definitely the issue of consumption. I think it has always fascinated me first of all because the society I grew up in was strongly characterised by consumption as language. I constantly saw it as a communication system, a way making the meanings circulate in our societies, diachronically comparable to the myths and the circulation of goods in primitive societies; and synchronically to the media and advertising. Ways of making the sense flow and ensuring a certain circulation of the information in a group. Secondly, it fascinated me as empirical challenge and resistance to the rationalisation of society in the Weberian sense. In other words, economic theories of choice are demonstrably poorly explanatory about consumption. Economic analyses, both heterodox and neoclassical, have always leaked a rationalism that in the best cases is reduced to methodological exigencies, in the worst ones it is blatantly ideological. I mean that, despite loving moral motivations, the heterodoxes expressed with the same code of the orthodoxes, trying to confute the latter's position through their own language. Thus relying on the same idea of what is objective/scientific and what is not, without discussing the complexity implied by the concept of objectivity is in a social science. If this rationalisation, this operational fiction, can still be implemented at the level of material production (even if a whole theory of economic reproduction is missing), it becomes impossible for consumption; in the sense that it turn into a blatantly forced and not explanatory abstraction scheme. Consumption in fact has, and always had, an existential and anthropological dimension that cannot be ascribed to deterministic natural laws (Weber actually showed that even for the spirit of production such hypotheses can be made). The typical response of economics is that it is interested in the quantitative and not in the qualitative aspect of consumption. One of the aims of this thesis is to argue that such an abstraction is misleading, since the quality (the reasons for choice, the meaning/representation given to goods and services) influences the quantity and vice versa.
So one reason why consumption fascinates me is definitely its ability to question the rationalisation typical of economics. Indeed, in consumerist societies, it tends to become 'an economy of meanings', where hard work is confined to areas where it is cheap and consumption goes hand in hand with other imaginative/emotional creating activities (such as narratives and images) in generating economic value.
Other general motivations that led me to explore this issue concern the central role of consumption in contemporary societies, now widely recognised by sociology and other social sciences. Indeed, it has been increasingly complementary to production both as a moral and as a means of defining the social identity of individuals: signs of consumption, media, and images are increasingly a place whereby value and identities are produced and through which companies characterise themselves. Consumption is also interesting in my opinion because of the blurring boundary with production that it has for contemporaries, especially from my generation onwards. The workforce becomes object of marketing, of merchandising. Thinking about social media, an individual unpacking a product (or using a service) in cam, to advertise it or himself, is consuming, but he is also working. Consumption provides the alibi to work while having fun, where 'having fun' means consuming and therefore getting excited, proposing emotions, producing feelings. Professional reviewers, food bloggers, influencers, commercial agents, personal trainers (and other jobs that presuppose body care), tour operators who give tips on social networks without taking any of the risks typical of the classic intermediary; there are many examples of the mixing bwtween consumption and production. Even the predisposition to work, i.e. the display of signs of predisposition (to work, sacrifice and so on) are indicators of the fact that production itself joined the consumption signs system. In other words, in today's society, one not only works, but also does the act of working. Many jobs are to a lesser or greater extent influenced by a logic of consumption as a communicative system. Varying

the title of a well-known Goffman's essay in a performative key, one could say 'the maximisation of the presentation of the self in every day life'.

On the other hand, there is a parallelism between the moralities of consumption and production, in the sense that consumption as moral (of *enjoyment*), as *fun morality* (and not as desire fulfilment, because there is an ideological aspect in the fun morality, as there was in the Puritan work ethic) also provides the conditions for working, for producing. Put in another way, modern man can, and often prefers, to work by consuming than to work by working; there are many such possibilities in a society where people spend a lot of time on the media and in general where the logic of communication tends to invade the whole of social sphere, with its law of variability and its need of innovation to avoid semantic wear and tear. For instance, the attitude (or *habitus*) of frequently changing jobs and tasks, if not nation, in order to renew oneself and put oneself back into the game, is a sentiment that finds an ethical origin in the same consumption sign system as self-production and that translates into a collective attitude towards job-market mobility, mobility that ultimately serves a globalised production. This is not to say that there are not people who take pleasure in moving around, getting to know new places and changing jobs, but that statistically there is part of the population that undergoes this morality and internalises it ideologically.

The etymology of consumption reveals an ambivalent and interesting nature on its own. The word comes from two Latin verbs that in Italian were confused by assonance: *consùmere* which gives the sense of wearing out, reducing to nothing, and *consummare* (*cum-summa*) which instead means to finish, to accomplish, but in the sense of giving perfection and fulfilment. This is why consumption has been said to have a paradoxical nature (Silverstone (2000)). Insofar as on the one hand it refers to an individual fulfilling a desire, on the other hand it necessarily links enjoyment to wear, tear and destruction. As Aldridge (2003) writes: *"consumption is experienced by people as something that simultaneously offers possibilities and imposes constraints"*. That is, on the one hand it is a mean of expression, but on the other hand we are bounded by the expressive code itself, i.e. goods/services. The paradox has also been declined by Appadurai (1988), who points out how in our societies we need to transform goods into commodities, to then 'demercify', personalise them, expressing (or appropriating of) meanings in everyday life.

Another reason for studying consumption is that consumerism constituted an ideological turning point of Western democracies, from a ridiculous clerical-fascist and sacralizing ideology, to an irreligious and desacralizing one (but precisely this desacralization fails and reveals its ideological nature right in consumption, where a "magic" social order emerges). This *derapage* of the materialistic dialectic has made a certain Marxist intellectualism, rationalist and progressive, obsolete or harmless in my view. And consumption is precisely that field Marxism (and socialism) rarely take seriously, basically because they disclaim the importance of the sign value (or sign-form) and tends to produce moralistic analysis.

Lastly, the way consumption is theorised by economists is important because it has implications in terms of fiscal and environmental policies.

I also agree with Mary Douglas when she writes that *"if we do not know why people need luxuries [i.e. goods beyond the needs of survival] and what use they make of them, we are a long way from taking the problems of inequality seriously.*

The first chapter is an essay on consumption and the method used is simply the exegesis of the text. The second is an agent-based application (models mainly used in the financial literature) to a sociological context and in particular to the sociology of consumption. The model shows how consumption dynamics can be out of equilibrium without assumptions about the primary or secondary nature of goods and needs. The third is an empirical text analysis exercise applied to academic economics papers on consumption. The aim is to understand, mainly through language, which are (if any) the differences between orthodox (neoclassical) and heterodox (mainly institutionalist and behaviourist) theories in analysing the topic.

# Contents

# Chapter 1

# For a social definition of consumption

**Abstract**

This paper highlights the still actual aspects of post-structuralist consumption analysis and in particular that of Baudrillard and Bourdieu. I analyze the today world of consumption through this theoretical lens. I do not deny that the consumer has an active role in the sense creation, that the meanings of consumption acts are variable or that in addition to the enunciator, an enunciateer and a socio-cultural context come into play. But I would rather argue that there are still valid reasons to recover a partially deterministic vision between the social position (and not the classes) and, this is the novelty of the paper, the mode of signification (and not the goods/services or their constellations, as in the historical Bourdieu's map). I identify various empirical facts of this connection between social structure and consumption. Finally, I highlight the social consequences of consumption as a language and the symbolic dimension this entails nowadays.

***Keywords***— *Sociology of consumption, post-structuralism, ideology, symbolic value.*

## 1.1 Introduction

In the sociology of consumption is widely recognized that the consumer plays an active role in the processes of sense creation and that lifestyles cut across the social hierarchy. Differences in consumption practices are related not only to the vertical but also to the horizontal differences in society. The meanings of goods and services are mobile and in the signification process both the socio-cultural context in which communication takes place and the semantic encyclopedias of the individuals or groups involved come into play. It must be said that an ordinary consumption to which individuals give no meaning exists (Gronow and Warde (2001)). This does not mean that in some cases the modalities of this consumption are not classificatory and classifiable. For instance Alan Ward pointed out (Warde (2015)) that households deploy electricity, oil and other environmentally problematic commodities without reflection. This is true and two observations deserve to be made in this regard: in Western societies this type of consumption is acquiring an ethical dimension. Secondly, the way of consuming certain commodities is in any case indicative of the type of culture and community one lives in, trivially: running water is taken for granted in some areas of the world and not in others, therefore the way a resource is used also reflects the type of society using it. From this point of view the way people consume is still explanatory of a given culture.
In this work when I speak of consumption I always and only mean it as a communication system. Any consumption where the consumer gives absolutely no meaning, conscious or unconscious, to the act (not even that of pure functionality) will remain outside the analysis. Some studies highlight psychological aspects of compulsion in consumption act (Lejoyeux and Weinstein (2010)), others theorize a form of cognitive dissonance from which the subject defends himself through the coherence and symphony of the meanings of goods; these psychological hypotheses too will remain out of the analysis. The starting hypothesis is sociological-semiotic, that is to say: in order to become an object of consumption a good must become sign. This does not mean that it has a unique meaning, but that an operation of signification or representation from an human being is required to speak about consumption in our western societies.

Before starting to discuss the central issue of the article, some disclaimers taking into account the contribution of the most recent theories, in particular semiotic and socio-semiotic, are necessary. Consumption is a complex field about which it is difficult to develop a theory (deterministic or not) including every concrete possibility, for various reasons that I will quickly try to report. In consumption, both the individual psychology and the empirical practices of the subjects come into play (Codeluppi (1993)).
Texts (consumer goods/services) and social contexts do not pre-exist each other but are defined simultaneously and interacting with each other. Each good/service does not have one and only one meaning and the analogy with Saussurian linguistics is not entirely explanatory, in fact in all possible social relations processes of construction of meanings occur with at least a triadic logic, which includes the product, the individual and the social relational context (Semprini (1996)). Therefore, even an institutionally imposed meaning on a good or a constellation of goods, is continuously called into question in every relationship (Solomon and Assael (1987)).

The meanings move not only top-bottom, that is, from the social constituted culture to the good, and then from the good to the consumer (as argued by G. McCracken (1986)), but also in the opposite direction; in other words culture is not a finished product, it is also created through the texts that are both creations and creators of the social. Thus the significance of goods is unstable for various reasons, including the fact that the consumer is both passive receiver and active constructor of these texts. In consumption conscious and unconscious elements intertwine, meanings made speech (the subject is able to express them linguistically), manipulated meanings and implicit meanings, which I propose here to call representations. That is, those meanings that the subject is not able to express linguistically, but uses and manipulates. Finally there is the structural aspect of consumption as language: although every good is a bearer of meaning in fact, there are no autonomous meanings: *"the meaning lies in the relations between all goods, just as music is in the relations delimited by sounds and not in a single note"* (Douglas and Isherwood (2021)).
Consumption is also a social activity comparable to the links of kinship and goods' circulation in archaic

societies; to the media, the formation of opinions on social issues and other ways of meaning circulation in our societies. In our secularized and rationalized western ideology consumption has been functionalized, something that at the micro level is manifested in the individual behavior of using the use value as an alibi for the sign one. And more generally in the tendency to hide or relegate in the untold all the aristocratic logic of the game and privilege behind consumer goods as signs. The democratic principles of equality and the puritan ethic of work require that only the functionality of goods be highlighted, even when these circulate and have their main social function as signs. In a sense, the circulation of goods under this form of value is the ghost of the aristocratic societies of the past.

After this operation of concealment of the sign value and the continuous raising of the use one, consumption does not seem to have such a large social function, but as Douglas and Isherwood (2021) argue, confronting Levi-Strauss: *"the meanings transmitted along the goods channel are an integral part of the meanings that we find in the channels of kinship and mythology; All three fall under the general concern of controlling information.*[1] *Only if they are analyzed together can they reveal their meanings to cultural anthropology"*

Semprini (1996), basing on the work of Umberto Eco, argues that there are two types of pre-existing knowledge in consumers: a dictionary of isolated terms and a semantic encyclopedia of relationships between terms. Therefore, in a specific situation the semantic baggage of the individual and the textual identity of the product create actually two discursive strategies. The first is that one of the consumer, which also follows from his ideas on the discursive strategy of the product itself in a certain context. The latter for the socio-semiotic theory is not a strategy purely elaborated by the object (as in Baudrillard's metaphysics), but is elaborated by advertisers, agents, salesmen, friends and other individuals who interact with the consumer. This strategy can also be structured according to the assumptions made by the consumer. So there is circularity and collaboration in the creation and modification of the social culture.

I add that the individual can manipulate the meaning for his own purposes, there may be dissonance between the semantic encyclopedias of the empirical issuer and the empirical recipient or linearity and accuracy of the communication. This asymmetry can also exist between the company that wants to advertise itself and some consumers. This asymmetry is potentially a source of simplification of the language used, therefore of the induced signification, since it must address to a wider audience as possible.

The Birmingham school and cultural studies first conceived the consumer good as a text, that is, as a process of construction of the sense where interact: the meaning of the speaker, a range of meanings that can be activated (and/or nuances of meanings) undaunted in the goods and the meaning of the listener. According to S. Hall (2007), as he writes in a famous article, there can be various decoding ways or levels: dominant-hegemonic, where the receiver decodes the message through the code used by the issuer. Traded: the receiver does not discuss the value system linked to the issuer's code, but declines it in his own way in various practical situations. Opposition: the receiver understands the signification induced by the issuer's code, but redefines its form within an alternative frame.

An important contribution this article starts from is the Vanni Codeluppi scheme (Codeluppi (2005), pg. 265). It takes into account the socio-cultural context, the consumer text, the issuer and the empirical recipient and two abstract roles that represent them "symbolically": the enunciator and the enunciatory. To which a possible world represented through the consumer text is added. I want to observe, in this regard, that the internal diagram of its scheme may be interpreted as the definition of simulation in Baudrillard; it is the simulation declined in consumption or in other words, consumption as a simulation field.

It must be recognized that consumption is a communication mechanism in addition to the others, therefore can be considered an enrichment of the modes of expression, even in the neocapitalistic phase that characterized the end of the second half of the twentieth century. It's a medium that oils the wheels of social interaction, so the elements that I will highlight in this work do not want to be the basis for a negative

[1]Hoping that conspiracy theorists and anti-conspiracy theorists will beware from giving a specific *meaning* to these words of Isherwood. Here the author refers to the various ways the most disparate societies in time and space have built systems of collective signification, for example through myths, the circulation of "precious" goods and women, as Levi-Strauss showed. In this sense Isherwood writes *"control the information"* and not in the trivial sense this formula is used today.

value judgment on consumption as a whole, but highlight its links with the social structure and solicit a certain type of analysis that brings out the ideological aspects and symbolic violence inherent in this code. It is for sure a communication mechanism in addition to others already operating in the constituted culture, but at the same time it is also an expressive code that can deprive the subject of the ability to create its own one, with its own symbolic aspects, as we will see later.
Among other things, the purchase choices can be coordinated and oriented towards political purposes: Cooperatives, consumer associations for product quality and fair trade, specific campaigns of boycott for some political purpose and also anti-globalization movements contesting the legitimacy of capitalistic order (for a detailed review see Trentmann (2012)). So, surely consumption is a mean of communication that provides the expressive possibilities of individuals and groups from some points of view, or better, on a certain ground.

I hope I have sufficiently argued, though not exhaustively, why it is difficult if not impossible to construct a general theory of consumption that does not lose explanatory power in various concrete situations. Indeed, this paper does not claim to create a general theory of consumption, but to develop some arguments in favor of the recovery of a certain sociological approach of post-structuralist mold that links consumption and social structure, of which the two French authors were seminar scholars. The basic idea this work moves from is that each individual or group of the social space defined by the forms of capital identified by Bourdieu, has a different way of meaning various things (status, prestige, phallic, elegance, precise style, healthy, green, functionality and so on). Two individuals in different points of the social space delimited by cultural, economic, symbolic and social capital can mean a precise thing (for example, prestige) also through the same object, but in different ways. So it is the way of signification that here I take as a relational variable with respect to the social class one belongs to and not the goods/services consumed.

In this introduction I try to clarify what is the difference between sign and symbol, because it is fundamental to understand what I mean about consumption in the rest of the paper. A classic example is the difference between the wedding ring (it is a symbol, even if its uses as a sign cannot be excluded) and any ring worn on the finger (a sign).
*Symbol* literally means "put together", two different parts that, as joined together, have a meaning. In ancient Greek *symbolon* was the card of *hospitalitatis* or recognition used by two families or two cities as a cork of the signed pact, was evidence of the agreement reached (indeed another meaning of the word is "agreement"). The ambiguity between sign and symbol arises from the fact that both seem to be something that stands in place of something else, something that "means" something else. But as Hegel says in the Encyclopedia of Philosophical Sciences: *"the difference lies in the fact that between the sign and what it represents there is indifference and conventionality: the sign can also recall the thing it must indicate (for example in the figure of a road sign), but fundamentally it is something different from the content it expresses. The strength of the symbol instead depends on the fact that it has appearance and content that are in analogy with what it wants to symbolize and is ambivalent outside the relationship it represents."* Hegel (2010)

The logic behind the symbol is a logic of ambivalence, the symbol is transcendental, it creates a new meaning only if linked to a relationship; and it is charged with emotion, but the logic behind the symbol is always that one of reversibility (of values and of the social order) and ambivalence. While the one behind the sign is a logic of difference, it is experiential. In primitive societies the symbol could not be defined by the logic of reason, there was just a linguistic impossibility that corresponds to the impossibility of reason to speak without replacing the very source of its language.
Corbin (2014) states that *"The symbol is not an artificially constructed sign, but is what spontaneously opens in the soul to announce something that cannot be expressed otherwise"*.
Jung instead tries to explain this difference by saying: *"the sign has a fixed meaning, being an abbreviation (conventional) that stands for a known thing or is a reference to that same thing, instead, the symbol indicates a polysemic content, undefined and unconventional, it has many similar variants, and the more it has at its disposal, the more complete and appropriate is the image that outlines its subject"*(Jung (1980)).

The symbol is alive for Jung only as long as it maintains this characteristic, it represents tension between opposites, between conscious and unconscious, between known and unknown, at the moment when the symbol gives birth to its meaning, dies and becomes a sign. Lévi-Strauss and Marcel Mauss also support the irreducibility of the symbol to the sign. Among some primitive peoples, in fact, the use of the word "mana" means force (magic, in the sense we need to understand it), but also action or quality, it can be both verb, noun and adjective, because it is pure form, it is symbol, and as such can assume any content.

Umberto Eco in Eco (2016) proposes *"to define as a sign all that, on the basis of a previously accepted social convention, can be understood as something that is in place of something else, while symbols refer to something more, a content that expands"*. Thus both the recipient and the accepted social convention condition the understanding of the sign, which varies from culture to culture. While symbols enlarge the vision instead of defining it. They have the ability to put together, to bring together distant elements in a new characterizing form, unique and source of new meanings, that is, they have a transcendental function. Stevens (2002) writes: *"According to Jung a symbol transmits something more and different from itself that eludes our present knowledge and it is precisely to this extent that it owes its charm and its power. As soon as its conscious and unconscious elements are united, it is as if a creative energy flows between them, releasing a sudden perception of meaning, a flash of intuition"*. The concept of *mother* is a good example to better explain the difference between sign and symbol: as a sign is the person who gave birth to us and raised us, but as a symbol recalls the experiences (sweetness, love or rejection) lived with his mother. Motherhood understood as the ability to generate and raise, the mother that all (?) have had. And also the great mother, understood as the creative and regenerative capacity of nature and man. In this sense the symbol of the mother reunites the emotions to those of other human beings, in fact in Jung the symbol has an archetypal value. I decline now in consumption this difference, in any case is important to clarify that the ambivalence is crucial as it distinguishes the symbol from the sign.

Symbolic exchange has always existed, but in primitive societies it was characterized by the disappearance of the object itself, only the relationship between the two or more individuals involved mattered. This symbolic exchange under capitalism has evolved into an intransitive object-sign, that is, it no longer counts the relationship and no longer defines any relationship, is simply an object whose differential value compared to all other objects is encoded as an expression of who you are, of your own identity and thus of the differences between you (or your group) and the others, but it does not presuppose any concrete relationship between those who exchange the meaning. The fundamental difference between the sign value and the symbolic value is entirely in this intransitivity and in this pre-codified relationship that characterizes the object sign. The symbolic object (which may be the traditional domestic object, craft and ritual) is the mediator of the relationship, the relationship itself refers to what the object means, to a part of the concrete experience (a concrete relationship). The sign object instead is intransitive, it is limited to designating the place of an empty relationship (the messages sent through consumer goods). The object-sign is a way of presenting to the others and understanding the others in the absence of a concrete relationship with them. The symbolic object is abolished in the exchange, the sign object designates exchange, it codifies the social relation and therefore abolishes it. So consumption conceived as signs exchange is one of the ways of depriving the individual of his own symbolic means of expression, of providing individuals with something that only at a first stage may seem just a meaning, but actually it is also a code.

Symbolic exchange responds to a logic of ambivalence because the object has no value in itself, regardless of the relationship it represents, while in contemporary consumption in most cases objects are signs, that is, they respond to the logic of difference (compared to all other sign objects). In this sense, the polyvalence of consumer objects and the activity of the consumer in constructing meaning is not different from the equivalence. That is, the postmodern vision of a range of activatable meanings and of many other variables in attributing meanings in consumption remains still opposite to the ambivalence of the symbolic object. In other words: both equivalence and polyvalence can be opposed to ambivalence, since there are forces (social, psychological and so on) that condition and conventionalize the interpretation. Baudrillard tries to use the ambivalence of the symbolic as a means to solve the equations of meaning that characterize the object sign in modern society. In trying to establish a parallel with Marx's criticism of exchange value as code of equivalence between commodities, Baudrillard basically extends this criticism to the field of signification and integrates Marx with Saussure.

It must be said that from so called *cultural turn* (Birmingham school) onwards, but in particular with the socio-semiotic approach, it has been theorized (explicitly or implicitly) that there is a mix between symbolic logic and sign logic. In the sense that the object itself may have a differential value compared to other objects, but then this value is renegotiated in every concrete social situation where at least two subjects (therefore a relationship) and a socio-cultural context come into play. This is true, but one wonders how much of this relationship is defined by the object sign in itself, that is, by its differential value with the other objects and how much does it define the value of the object itself starting from the uncertainty on the value? Uncertainty typical of symbolic ambivalence? In other words: is it more the codified sign object that designates the relations between men in our society, or the relations between men that define the value of an object in itself ambivalent? I, as it is clear from this paper, am more for the first hypothesis, I believe more in the power of the object on man than vice versa. Or rather, under capitalism I see consumption as an ideology precisely because of this operation it carries out on society. As a regulator of relationships between men.

If objects as signs act as regulators of relationships between men, a person who socializes does nothing but learn to manage the code of differences that he finds in society as a rule. The symbolic aspects disappear from the moment when (and in all the fields in which) the subject (or groups) do not have the strength to reconsider the "socialization" encoded in the sign objects.

`https:///www.youtube.com/watch?v=HGP-Tlyyyaw`. The video of course must be seen net of the spectacularization that a reality show needs to sell itself, and is just a trivial example of the mix job-consumption-communication. In this sense the present paper is fully in the "materialistic" tradition, that is, in the idea that the true materiality of the commodity (as for Marx) consists in its *form*, which is always that one of a social relationship, while all our idealism converges towards an objective materiality (a use value) of the goods and services.

Umberto Eco, however, spoke of *symbolic way* to make it clear that every phenomenon can actually be declined both as a sign and as a symbol. Bourdieu follows a more rigorous method, suited to an academic environment compared to Baurdillard. He strives to identify the relations of domination involved in the judgement of tastes, relating the social position defined by various types of capital with consumption and the micro-languages related to them. The types of capital that enter his analysis, in addition to the economic one, are: cultural (the level of education of the person and of his family), symbolic (the symbolic power held over others), social (the set of social connections, chosen or obliged, the social network). The distribution in the social space takes place both as a function of the total amount of capital (first level) and as a function of its inner composition (second level), since the types of capital are interdependent and people are able to put in place conversion strategies between forms of capital.

Bourdieu has given rise to a whole series of empirical studies relating consumption practices and social structure. His *habitus* concept encloses a series of uncionscious predisposition of judgment of taste, meanings and representations. He defines it as *"ability to produce classifiable practices and works, and ability to evaluate and distinguish these practices and products"*, Bourdieu (1987), p. 207. In short, it constitutes the taste through which one builds a social imaginary and a lifestyle. *"More generally, the space of the positions retracts into a space of the positions taken through the space of the dispositions (or habitus); In other words, the system of differential deviations defining the different positions in the two main dimensions of the social area (economic and cultural capital) corresponds to a system of differential deviations in the properties of agent (or agents), that is to say, in the practices and possessions. To each class of positions corresponds a class of habitus (or tastes) produced by the social conditioning associated with the corresponding condition and, through these habitus and their generative abilities, a systematic set of goods and properties shared by an affinity of style"* (Bourdieu (2000), 2000: p. 20). The habitus therefore concerns both the structured

dimension, since it generates and organizes individual or group's practices and representations, and the structuring dimension, delimiting the field of possibilities of social thought and therefore the field of action. According to Bourdieu *"The taste, propensity and aptitude for the appropriation (material and/or symbolic) of a certain class of classifying and classifying objects and practices, constitutes the generative formula that is at the origin of the lifestyle: unitary set of distinctive preferences, that in the particular logic of each of the symbolic subdivisions: furniture, clothing, language or physical* hexis *manifest the same expressive intention"* (Bourdieu (1987): p. 178). Therefore consumption concerns the propensity towards "aesthetic" (kantian/elitarian and non kantian/popular) attitudes, which function as social strategies or tactics for the definition of the status with a dual purpose: maintaining the position and maintaining the distance between and within groups. Indeed the aesthetic features of the objects depend not only on the connotations conferred by the manufacturer, but on the possibility of the user to adapt to the class rules (and this classism is an old conception for sure as many scholars wrote) that in a certain historical- cultural context discriminate what is artistic (for instance) from what is not, and so on and so forth for other meanings (what is alternative and what is not). Bourdieu writes *"Objects, even when they are industrial products, are not objective in the sense that this term generally has, that is, independent of the interests and tastes of those who observe them, and do not impose at all the evidence of a universal and unanimously accepted sense"* Bourdieu (1987). From this vision the idea of a stratified society comes out, but also hierarchized of course, characterized by the struggle for the appropriation of cultural and economic goods as distinctive signs. The elites, compared to the subordinate classes, have the power to found the illusion of a natural distinction, associating to their habitus an idea of superiority that corresponds nothing but to their way of being in society. The ruling class re-establishes the legitimacy of the domination of economic, social and cultural capital. It is therefore in this class that the change of the consumption system, its rules as language and the transgression of the latter, must be sought, when the signs of distinction are threatened by disclosure and vulgarization. "Separate holders" are opposed to "pretentious pretenders": the middle classes, who seek to distinguish themselves from the popular classes. The true privilege of the elites, however, is the following: only this class able to produce the models, the middle classes are uncertain about the rules and how to conform to them. And thus suffer the symbolic violence of the code. Here I find a profound analogy with Baudrillard's thought which indicated exactly the same thing as far as the true discriminator is that the subalterns are never sure about how to comply with the rules of the game. In these two authors, therefore, the semblance of a growing democratization through consumption is aimed at mystifying and hiding the socio-economic and cultural differences that constitute the social dimension.
Despite the various dimensions involved Bourdieu discusses also the importance of the relationship between forms of capital, what it calls "conversion strategies". This formula means that those with greater economic capital have more access to the other two forms of capital, and of course, due to a kind of circularity, have greater possibility of converting the latter into economic capital. The subcodes that govern the way of being, owning and using objects (or services) contribute to build the representations of the world by a given social group both at the conscious level and at the unconscious one, so these social groups are coherent with the distinctive logic of the society of capital.
As crespi says *"If analyzed in depth, the theory of Bourdieu appears, therefore, in the end as a more sophisticated version of the structuralist determinism of the Marxian type: the action, in fact, has, in this theory, a subordinate position, how much it is limited to actualizing objective cultural schemes having their ultimate root in the structure of class"*. (F.crespi, manuale di sociologia della cultura 2003: p.139).
For sure this determinism is no more actual, but we must admit that the tactical behavior and the relevant forms of capital are still there, in actual consumption.

The post-structuralism applied to consumption was not a prerogative of Bourdieu and Baudrillard. Also authors such as Appandurai, Sam Friedman, the strand of cultural studies (in part), Barthes, Gottdiener and others applied its concepts to consumption. I focus on these two first of all to perform a deepened analysis and not an overview, secondly they are the authors who I think have the most urgent implications to recover if we want to understand consumption today.
The next section is a brief literature review of the two authors, their criticisms and literature that took

up the post-structuralist vision. In section three I deepen the reasons why the deterministic aspects (that surely does not concern all the consumption acts) between social structure and ways of signification in consumption can lead to important reflections and studies. In other words, it is a section devoted to the reasons why it is important to recover these two French authors and the consequences that this operation can bring in terms of explanatory power. Here are some: there are still forms of trickle down à la Simmel, i.e. goods/ services that as long as they are still distinctive remain in the hands of an elite, then once lost their distinctive charge filter to the lower layers. Bourdieu's trickle round theory also presupposes a tactical and classist use of consumer practices: the privileged class adopts popular practices to distinguish itself from the middle class that aspires to their position. And also this logic is quite common in advanced societies. Thirdly, there are still today differences in micro languages, combinatorial practices and ways of signification that are attributable to social position in terms of forms of capital (and again, not classes, at most *strata*): a striking example are goods/services that are not understood by the majority, but whose social value is understood only by a small group. Or again, the different ways by which they mean status, elegance, or any other thing, individuals with different capitals (in the sense of Bourdieu, in one of the four forms). A fourth reason for recovering these authors, is that there are sub-cultures (youth or non-youth) that create from the bottom a meaning, a set of meanings or lifestyles. But these social meanings, if they spread, are monopolized at the top and redistributed in the form of simulacra, that is, signs without referents. This operation neutralizes the social meaning and makes it hyperreal, overloaded with an empty (no referent) meaning.

Other reasons for recovering a post-structuralist approach are outlined in section 3. I conclude by focusing on the social consequences of consumption as a form of communication. I maintain that it exerts symbolic violence on individuals (in the sense of Bourdieu) and greatly simplifies the semantic languages and encyclopedias operating within social culture. The last section concludes with a handful of practical examples that led me to formulate the ideas of the paper and possible consequences of such a research approach in consumption.

## 1.2 Related literature

There is much evidence of how the consumption's communication system is a facilitator of social interactions, of élite formation, of solidarity acts or collective mobilization and rebellions (Martens and Casey (2016), Maffesoli (1996), G. D. McCracken (1990), Reimer and Leslie (2004), Thornton (1995)). This shows once again that it is difficult to give a moral judgment on the positivity or negativity of consumption as a communicative system, it is simply a further form of communication, in addition to the others that already operate within a given culture. One famous stream of North American sociologists and anthropologist is labeled Consumer Culture Theory, born mainly in the buisiness and marketing departments. Arnould and Thompson (2005) in their manifesto of CCT conceive the consumer as an interpretive agent inside some symbolic boundaries.

In this stream of literature too there are references to a post-structuralist analysis. For example, Holt (Holt (1997a), Holt (1997b)) shows, among other things, that people with high cultural capital apply critical judgment to all the cultural forms they come in contact with and experience leisure as a moment of self-reliancerealization, deepening the topics they are interested in. While those who have a low cultural capital read the cultural elements according to an external code and live leisure as a value in itself.

The differentialists (Bourdieu and Baudrillard) had an idea of consumption as an institutional and classist language ( Baudrillard (2016b), Bourdieu (1987)) where micro-languages and goods/services appeared to reflect the social hierarchy and the transition from one to another represented a real or hoped-for process of social mobility. The basic idea is that people "speak" the code and sub-codes of consumption and objects, not following strict rules, but play with them, cheat (they use it tactically) and bring out their own "class dialect". As Roberta Paltrinieri writes, Bordieu and Baudrillard consider that *"each lifestyle acquires its own meaning by differentiating and opposing itself to others, which is to indicate how the general code of differences governs social life"* Paltrinieri (1998). The analogy with language lies here: as the code of

language "surpasses" the individual consciences who speak it, so the code of consumption does. In the sense that from conscious and unconscious elements in handling the code, possible social classifications emerge. Already from these few lines we can see the importance that structuralist anthropology and Saussurian linguistics had for this stream of studies, even if both the authors were aware that the analogy with the language was not entirely correct. They knew that the rules of linguistics do not apply properly to consumption, however, as Baudrillard argues, linguistics has similarities with consumption since: *"Outside the field of its objective function, where it is irreplaceable, that is, outside the field of its denotation, the object becomes replaceable in an unlimited way, that is, in the field of its connotation, where it acquires the value of a sign. Thus the washing machine serves as a utensil and acts as an object of comfort, prestige etc. The latter field is precisely that of consumption"* Baudrillard (2016b).
Taste, therefore, would play a function of social classification of individuals and would exist a class' "moral" (or unconscious predisposing cognitive and culturally constituted structures) that conditions choices. At this point it must be said that this idea of a class' moral has widened and is much more homogeneous than before between social strata, but the way of putting it into practice remains however indicative of the social position. One of Bourdieu's fundamental contributions in highlighting the unconscious aspects of consumption was certainly the concept of *habitus*, widely discussed in the literature (for instance by Lizardo (2004) and King (2000)). Here I limit myself to saying that the importance of this concept is, above all, to question the naturalness of categories widely used in social culture such as "character" and taste. According to Bourdieu, they are not innate cateogories, but acquired ones. The *habitus* is in fact in Tommaso D'Aquino what the *exis* was in the Aristotelian tradition, *exis* comes from *echein*, "to have", so Bourdieu tries to emphasize the fact that it is something acquired, historically built. The Marxist imprinting of Bourdieu's thought can also be seen from the fact that, being *the habitus* something historically constituted, it can be deconstituted and therefore there are possibilities of emancipation.

On the other hand, an aspect of Baudrillard's analysis that has not been sufficiently stressed is a good argument to resume talking about the links between consumption, production and social structure. The author highlights the fact that even the social meanings that arise from below, unless they remain a local and secondary phenomenon, are monopolized at the top by the (re)productive order and redistributed (with variations on the theme) from the top under the form of differential sign values, detached from the cultural referent where they were generated. In this sense, the author speaks of simulacra, that is of signs without referents, because that value is not lived in first person by the consumer, who often does not even know the historical origin and therefore the feeling behind, but it is taken as the differential sign of a code that does not belong to him, an external code. The consumer does not invent a code to express his feeling or meaning, but by analogy (therefore by fetishism) takes the ready-to-use abstraction scheme, so basically the consumer simulates the meaning within a predetermined *frame*. This dynamic is evident if you analyze the trap and the emancipatory potential that someone claimed to have Kaluža (2018).
Dialoguing for a moment with this paper I suggest that maybe the emancipatory potential could exist (but I am not sure, there exist also subcultures artificially born since the beginning in the form of a simulacrum) as long as the trap style was a sign with a referent, the concrete lifes of those people living in the "dirthy south" of US, but if it becomes a pure sign, that is a simulacrum (as happened from 2009 onwards with artists such as Young Jeezy, Gucci Main and companies such as Gucci and Balenciaga) loses all the emancipatory potential, indeed it becomes another tool of symbolic domination of the code on individuals, as an expressive means of a neutral transgression (indeed favorable to production). Bruner (2018) well describes this process for the rap music. I'll take this example from the last section. In short, Baudrillard is telling us that there is a force (monopolization at the top of a social meaning and redistribution) that fights against the emancipatory potential of the active consumer of post-modern theory. And I count this among the good reasons for reconnecting the analysis of consumption with the production system, that is, with a real production of a code of differences and therefore of trivial, naïve, simplified categories of perception.

The criticisms levelled at these two authors are varied and mainly concern an excessive determinism between goods/services consumed and social stratification. The purpose of their research, however, was

precisely to identify regularities, social laws behind consumption, although they were aware that not the entire process could be described according to precise laws. Therefore, a criticism of the generalisability of their theses is legitimate, but it must also take into account the authors' intentions at the beginning of their research and of course a historical context in which Marxist analysis, the Freudian and Lacanian unconscious, structuralist anthropology and Saussure's linguistics were hotly debated.
One of the major criticisms levelled at Bourdieu is precisely the fundamental determinism between social structure and consumption practices. Jenkins (1982) argues that Bourdieu's scheme is circular, as it starts from unconscious structures that produce culture, which in turn produces everyday practices, which reproduce the unconscious structures. Other authors have instead tried to demonstrate how cultural and social changes (i.e. breaks in the circularity of the schema) can be analysed within a Bourdieusian framework (from the mismatch between the instances of the social field and the individual *habitus*, from an explicit pedagogy, the reflexivity of identity formation and the openness of our contemporary society). With regard to this type of criticism it could be suggested that a circular and self-strengthening system is nothing more than a channel of social reproduction. This theme of reproduction was of interest to Bourdieu, who tried to identify some of its main axes, for instance the French educative system. (Bourdieu and Passeron (2018)).
The concept of cultural omnivorousness conied by Peterson (1992) also challanged Bourdieu's theory and was interpreted in relation to it. This concept refers to the fact that in the US the link between high socio-economic status and high culture has diminished. In general from 1980 onwards economically privileged and well-educated social strata started to consume both popular and élitist cultural forms. But there is yet no agreed theoretical interpretation of these empirical results. The fact that this happens can indeed be seen both as a form of democratisation and equality of access to culture, and as forms of distinction, since it is always the economically and culturally privileged classes (at least middle classes) that are 'omnivorous'. In reality, Ollivier (2008) has shown that there are many types of omnivores and not all of them belong to the upper classes.
Trigg (2001) describes how the theory of Bourdieu can be used to explain and remedy all the shortcomings (which, however, also suffer from a lack of socio-historical contextualisation and take root from a fundamental misinterpretation of *the theory of the leisure class*) that have been imputed to Veblen's theory. One example is the shift from trickle-down logic to the trickle-round logic theorised by Bourdieu, according to which the upper classes also adopt popular class tastes, but always with a tactical purpose. *"The upper classes sometimes adopt the tastes of those at the bottom of the social ladder in order to outflank members of the aspiring middle class, who find it difficult to compete due to insufficient stocks of cultural capital. In practice, the middle classes with sufficient economic capital aspire to higher positions through practices to which the lower classes do not have access. Here, then, such practices become distinctive for the wealthier classes, which hold off those immediately below, the aspirants to their position"*(Trigg (2001)). Trigg shows that Veblen's theory is often simplified and decontextualised, thus making it subject to irrelevant attacks.

What we can say, however, about Bourdieu and Baudrillard's approach, is that it is particularly suited to addressing questions of power and domination: the capacity of consumption to reflect and reproduce social structure. As Alan Ward writes *"Culture and consumption are not innocent; differences in cultural competence and practice map onto wider contours of structured inequality and social injustice"*. Warde (2015)
Another criticism, which perhaps relates to a deeper issue, levelled at the two French authors is the verbosity of their arguments. See for instance the book Sokal and Bricmont (1997) where the authors wonder what would remain of Baudrillard's thought once stripped of its language. In this text, moreover, the authors make an attempt, intended more to complement and dialogue than to criticise, to purge certain intellectuals, including Baudrillard, of an erroneous and heteronomous scientism, and so far the criticism is more than legitimate, even if the purpose of certain scientific quotations is often metaphorical and poetic. With regard to the criticism of language, however, the issue is more difficult to analyse. Here, indeed, it is a matter of one's idea about language: whether it is merely a cataloguing medium for expressing one's ideas or whether it is both a bearer and a generator of ideas. I am inclined to the second hypothesis: while not denying the function it performs as a means of communication, I raise the importance of admitting that it has a

symbolic and autonomous aspect (detached from the subjects who speak it and able to influence them). It is therefore hard to answer the critics of Sokal and Bricmont (1997) if the basic belief they start from is that language is merely and simply a mean of communication. This criticism is linked to their analysis of consumption, as it passes through non-trivial linguistic depth and articulation, such as the distinction between sign and symbol, the concept of *habitus* and in general the kind of language of the main essays I refer to in this article: Bourdieu (1987), Baudrillard (2016b) and Baudrillard and Dalla Vigna (2010).
As argued by Peters (2014), sociology's determinism for Bourdieu has an ethical-political significance: it can provide agents with the tools to understand the social mechanisms they are involved in and thus detach themselves from these mechanisms, gaining a margin of freedom. Whereas saying that everyone is free on the contrary is a way of domination, of course. *"Like any science, sociology accepts the principle of determinism, understood as a form of the principle of sufficient reason. The science that must give reasons for what is ... postulates... that nothing exists without a reason for being'. The sociologist adds: 'social reason' - nothing is without a specifically social reason for being. ... The degree to which the social world is determined depends on the knowledge we have of it. On the other hand, the degree to which the world is actually determined is not a matter of opinion; as a sociologist, it is not for me to be 'for determinism' or 'for freedom', but to discover necessity, if it exists, in the places where it is found. As each advance in knowledge of the laws of the social world increases the degree of perceived necessity, it is natural that social science is increasingly accused of 'determinism' the more it advances. But, contrary to appearances, it is precisely by increasing the degree of perceived necessity and providing a better knowledge of the laws of the social world that social science provides more freedom. Every advance in knowledge of necessity is an advance in possible freedom.... An unknown law is a nature, a destiny... a known law appears as a possibility of freedom"*. Bourdieu (1993).

In Bourdieu's thought, the articulation between agency and structure is not linked to the dichotomy between free will and determinism in accounting for human conduct. The dialectical interplay between the subjective and objective dimensions of the social world does not refer, in his theory of practice, to the confrontation between the agent's freedom (at least if understood as the absence of determined behaviors) and the necessities imposed by an external social universe. It refers rather to the logical role of subjective practices in the explanation of social phenomena. This is why it is important to distinguish between objectivism and determinism, following Bourdieu's own vocabulary. Broadly defined, objectivism is embodied in all the approaches that consider the reference to collective structural conditions and tendencies as data not only necessary, but sufficient to the explanation of social processes. The agents' subjective intentions and representations could be, thus, summarily coming from the inventory of variables that compose the explanations of social-historical facts, while the individuals could be residually deemed as epiphenomena, conductors, or supports (Bourdieu often quotes the Weberian term *Trager*) of causal forces over which they would have neither control nor consciousness.
Basically Bourdieu rejects the "illusion of transparency" typical of the sociology of the common sense. He thought that the causes of social processes are not reducible to individual intentions and representations, since these individuals are immersed in this process both actively (constituting it) and passively (as information receivers). In his own words determinism is something that *"no science can reject without disowning itself as science"* Bourdieu, Chamboredon, and Passeron (2011). There is a form of disenchanting in this view of the social world since humans are modeled in personality by social historical conditions which are not object of choice, but end up objectivated in their subjectivities.

Analysing the socio-historical (and not the natural) conditions and forces underlying our social action can therefore, according to Bourdieu, lead to a recognition of these forces and thus to at least a partial form of liberation, a release from them and the consequent greater dynamism of society. After all, Bourdieu is talking to us about the transcendental aspect of culture. Culture without transcendence is only a form of elitist notionism, a reservoir that can be used as a supplementary *mana* when the social situation calls for it. In this sense, both the culture perceived only as institutionally legitimated series of informations, (as can happen at school) and that of fashion shows in the midst of monuments, spectacularised as empty

beauty, lack transcendental function. Under these conditions, the consumption of culture (for instance art) becomes like the consumption of anything else, does not even induce an imaginative effort and does not change any worldview. Instead, he suggests that the task of sociology is to induce a form of cultural transcendence and an understanding of one's own actions within a framework of Marxist liberation.
He writes, somewhat loftily: *"frees us by freeing us from the illusion of freedom"*. In any case, consumption applied to culture, I would point out, means once again turning it into a sign with no referent, in all those practical situations where there is no transcendence. To consume culture means to enjoy it as a service without it changing your view on something or someone, your way of reasoning or even simply a new meaning: culture can be consumed under the condition of the absence of transcendence.
A criticism to the Baudrillard view of tastes instead comes from Gerardo Ragone. He raised two points: the first one is that the society analysed by Baudrillard was characterised by an economic boom, while later on, the employment crisis and austerity proletarianised various middle strata. Thus consumption would be less important in terms of a distinctive logic according to Ragone, or at least it would be less linked to a logic of social integration. As a matter of fact, one can reply to this criticism that what that economic boom changed also consisted in the integration of a certain traditional morality that no longer suited production, with a fun morality that, high or low income, became an individual motivation to produce and to consume. Ragone's second criticism concerns the internal logic of Baudrillard's discourse. In Baudrillard, the middle or lower strata apply a ritual logic to objects/services that the upper strata use objectively and rationally: the television, the organization of the domestic environment, etc. Gerardo Ragone argues that this approach is wrong given that there is also a rituality of *"the sophisticated paradises of the ruling elite"* (the premiere of a successful film, the clubs, academic ceremonies, and so on). According to Ragone, the contradictory logic between rationality and rituality is transversal with respect to all social classes. In other terms, there would be simulation for all social classes. This is certainly true and constitutes an absolutely acute observation. However in my opinion what Baudrillard and Bourdieu want to highlight is that in *the same context* one class is relegated to a magical economy and the other to a rational and objective one, this is where the discriminatory function of consumption lies. Besides this, it is also true that all classes have their own *potlatches* as Gerardo Ragone says. *"In short, it is certainly true that, for example, behind household chores there is a" rhetoric of salvation", an often obsessive desperation for one's own social destiny, as it also happens for the indiscriminate viewing of all television programs; but isn't it the same for bridge tournaments or for appointments in underground theaters, for holidays in Porto Cervo or for the South African safari? "* (Gerardo Ragone, 1977, https://opcit.it/cms/?p=97). This is true, but it is not by chance that they are different activities, this is what Baudrillard and Bourdieu tried to tell us.

Another critique of Baudrillard's analysis comes from Gilles Lipovetsky (Lipovetsky (2002)) who pointed out that the great originality of postmodern consumption is its desocialisation, i.e. the fact that it has value as individual pleasure and satisfaction, while social and communicative value would be secondary. In my opinion, Lipovetsky noticed an increasing personalisation of choices, which is indisputable. But this does not mean that such personalisation is detached from the social aspect of consumption, any more than the spectacularization of enjoyment and pleasure is. Is enough asking oneself why signs of enjoyment and happiness are exhibited on the social networks (Gianluca Vacchi's *enjoy* for instance, an italian (ex) influencer on Instagram). Moreover, as I said before, consumption brings with it a *fun morality* that has nothing to do with desire and is internalised in an ideological way (I am still referring to a statistical fraction of the population). This shows that individual enjoyment or choices personalization is not detached from the social aspects of consumption, quite the contrary. An institutionally important critique of Bourdieu comes instead from Shove and Warde (2002), who highlighted phenomena antithetical to a determinism with social structure in the Marxist sense: 1) Firstly, Warde points out that horizontal differentiations are more significant than vertical ones. 2) The democratisation processes of consumption have complicated the readings of goods/services in terms of social differentiations. 3) Class is no longer a valid category for distinguishing social groups. 4) Consumption behaviour is increasingly personalised and cannot be associated with a group, class or stratum.

Let us try to sketch a response to the first criticism. One can also give a class reading of horizontal differentiations, in this sense consumption can be seen as a particular tactic of the strategy *dividi et impera*, for example: an beautician who cares a lot about her image is unlikely to cooperate for a higher salary with a factory worker who ends the working day with dirty hands, even if they both earn 1200 euros a month. She differs from him through lifestyle even though in a materilistic sense they belong to the same social class. Not to mention the probability that a human relationship is established between them, reduced almost to zero by their respective lifestyles: consumption is ideologically interiorized and acquires symbolic power also because it is seen as a mean of relation with the opposite sex or any sex we are interested in. So horizontal differentiations as deterrents to social cooperation still bind consumption to classes, even if in a negative sense. Another response to Warde's second argument: the fact that consumption becomes increasingly personalised does not mean that it loses its feature of socially positioning individuals, even if this positioning no longer takes place entirely on the basis of social class. Certainly Bourdieu's determinism is excessive and outdated. The idea that individuals are driven to act by a class morality does not take into account the progressive cultural homogeinisation due to the consumption-media system, which tends to blur the differences that would instead emerge based on the cultural capital of the family of origin and the school attended. However, consumption choices are still able to define the strata, at least at a low level of segmentation (Friedland et al. (2007)). Michel de Certau in his book 'The Invention of the Everyday' criticises Bourdieu saying that the concept of *habitus* underestimates the individuals creative capacity. Silverstone (2003) writes: *"Although Bourdieu uses the analysis of consumption to highlight the construction of patterns of everyday life in contemporary society, and does so with convincing results, he fails to emphasise the dynamic: the shifts and turns, the flickers and resistances that in their meaning or lack of meaning actually make consumption an active, sometimes creative process where status and social identities are asserted, claimed and constantly negotiated".*

However, there are also non-deterministic readings of Bourdieu and of his concept of *habitus*. See, for instance, Barrett and Martina (2012), where the authors show that habitus, even if it operates at an unconscious level, can be modified by events or enviroments that promote reflection and self-questioning, altering in this way the perception of own education and life trajectories.

There have been attempts, such as that of Trizzulla, Garcia-Bardidia, and Rémy (2016), to water down Bourdieu's structural determinism while maintaining it as a basic principle of analysis. The authors attach greater importance to the subject, emphasising the non-uniqueness of the individual *habitus* and the relative autonomy of social fields.

## 1.3 Why recover Bourdieu and Baudrillard

One of the most important papers highlighting the importance of recovering the post-structuralist approach is Holt (1997b). Holt, explaining the decline of empirical studies linking consumption and social structure, writes: *"Common academic wisdom attributes this decline to the diminishing influence of social conditions in structuring consumption patterns in advanced capitalist societies.... The basic premise of this study is that there is an alternative explanation for the decline in research describing the social structure of consumption. I draw on a group of contemporary social theorists who have suggested that social collectivities continue to structure consumption patterns (and vice versa), but in increasingly subtle ways"* (Holt (1997b)).

Holt's work is important because it distinguishes with great accuracy the two prevalent approaches at the time (object signification and personality/values) from the post-structuralist one.

*"Both the object signification and personality/values approaches assume that lifestyles are shared consumption patterns. In the object signification approach, lifestyles are composed of sets of cultural objects assumed to have a distinctive social meaning marking those who consume the set (Levy 1959). For example, concepts such as consumption constellations (Solomon and Assael 1987) and Diderot unities (McCracken 1988) describe clusters of consumption objects that confer particular meanings on their consumers. The person-*

*ality/values approach lacks an explicit conception of social meaning: consumption patterns are understood primarily in material rather than symbolic terms. Implicitly, however, this approach also assumes that social meanings are immanent to shared consumption patterns and, so, are readily interpretable by the researcher. In contrast, from a poststructuralist perspective, consumption patterns have no immanent social meaning qua pattern. Instead, lifestyles are created by relational differences between consumption patterns, their meanings are constructed by and exist in these differences."* (Holt (1997b)).
In other words, the aspect of linguistics that is found in consumption consists in the differential nature of meaning and not its uniqueness, as many critics of the analogy between Saussure and the sociology of consumption argued.

The main characterizing points of the post-structuralist approach according to Holt are five: 1) Consumption patterns are structured by contextualized cultural frameworks. 2) Consumption patterns consist of regularities in consumption practices. 3) Lifestyles are constructed by symbolic boundaries between consumption patterns. 4) Lifestyles are collective phenomena. 5) Lifestyles are dynamic sociohistorical constructions. To better clarify the differences between motivations that may appear equal to each other see Holt (1997b).
In particular according to Holt *"Consumption can be conceived as a field of social life that is organized by the expression of tastes. As such, consumption is distinctive from other fields that are organized around different pursuits such as scarce productive resources (business), power (politics), metaphysical certitude (religion), and formal knowledge (education). All of these fields serve as domains in which the social organization of society is played out and, hence, reproduced. Thus, the key collectivities that together constitute the social relations of a society (e.g., those formed around master social categories such as class, gender, race/ethnicity) are typically represented in each of these fields, including consumption. Consumption is socially patterned because people who share similar social conditions acquire similar tastes that organize their consumer actions"*.

Many of these points are still valid today and constitute good arguments for recovering a certain approach in the study of consumption. I would add that the postmodern idea of the free consumer is a way to get rid of the burden of taking a political position on the liberals ideals of consumer sovereignty.
Finally, to conclude with Holt's analysis of lifestyles: *"The key collectivities that together constitute the social relations of a society (e.g., those formed around master social categories such as class, gender, race/ethnicity) are typically represented in consumption. Consumption is socially patterned because people who share similar social conditions acquire similar tastes that organize their consumer actions"*.

Of course, Holt also realises that social conditions are not mechanically reproduced by lifestyles for a number of not very interesting reasons, which are basically the same reasons why it is impossible to create a general deterministic theory of consumption. One of these reasons is that although other dimensions of social life such as the political, economic, technical, and religious spheres are distinct from consumption, they are not autonomous and, so, often interact with consumption patterns. For instance as Holt noticed: *"the emergence of the yuppie lifestyle among upper-middle-class professionals in the United States in the 1980s is often linked to economic and political shifts that significantly raised the real incomes of this group relative to others (Belk 1986)."*.

I would add that by adopting specific lifestyle (or simulating using consumption as one of the main means) it is easier to enter certain companies. And furthermore, there are companies that promote a specific lifestyle. Some in a less intense way, think for example of the requirement of shirts for men or non sneakers and non-open shoes for women. Others in a more stringent way, such as uniforms, hairstyle standards and so on. Ecology itself is unfortunately reduced to a simulacrum. Employees can adapt in two ways: suffer the symbolic violence and try to conform, to be in line with the lifestyle (the "philosophy") that the company promotes. In the other case, it is the company itself that involves its employees with

concrete initiatives, such as the supply of clothes and accessories, training and refresher courses, or directly with internal constraints and regulations. Berlusconi was a pioneer of this attitude in Italy, think of the suitability for a job based on physical appearance. In fashion companies, there are the so called "Grooming guidelines" that define the appropriate aesthetics for each company. In short, it is so evident that in developed societies the job-world has been reunited with the sign system of consumption that we feel like saying with Baudrillard that: *"An early stage of analysis was to conceive of the sphere of consumption as an extension of the sphere of productive forces. It is the reverse that must be done. One must conceive the entire sphere of production, of labour, of productive forces as spilling over into the sphere of 'consumption' understood as that of a generalised axiomatics, of a codified exchange of signs, of a general design of life. Thus knowledge, aptitudes, but also sexuality and the body, imagination (Verres: 'Imagination alone remains tied to the pleasure principle, while the psychic apparatus is subordinated to the reality principle [Freud]. We must put an end to this waste. Let the imagination actualise itself as a productive force, let it invest itself')"* Baudrillard (2016a).
Let us try to identify some absolutely concrete elements the reasoning behind this paper starts from. What are the empirical facts that highlight the link between social structure, consumption practices and modes of signification?

1) Trickle-down mechanisms still exist. Goods/services that are initially elitist and are abandoned when they lose their distinctiveness. It is not the purpose of the paper to identify the social strata involved in these mechanisms, but it is easy to think that the strata with the most capital, especially cultural capital, such as executives in public enterprises or university professors, will not get involved in certain temporary fashions. What is important for the purposes of the argument is that the *trickle down* still exists, even if it concerns more a passage of needs/goods/services from strata with high economic capital to strata with low economic capital, than a difference in cultural capital. The important thing is that the former have high symbolic capital in the eyes of the latter (recognised by the latter therefore, since symbolic capital is based on recognition), leaving aside the cultural capital of the groups involved in this trickle-down mechanism. Empirical evidence of trickle down in our societies is provided by Galak et al. (2016).

2) A second empirical fact I faced in society that pushed me towards the theses of this paper is the trickle round. It is a more subtle version of trickle down, in fact it also contemplates the possibility of the upper strata adopting popular practices to distinguish themselves from the middle class, those individuals or groups trying to climb the social ladder. In practice, the upper strata super-distinguish themselves. Riesman had already identified this form of *ostentatious under-consumption*. It is seen as a way of defending oneself against the social pressure of the upper-middle strata. If one reflects about it, vulgarity is often defined as just that: the attempt by middle or upper-middle strata to behave in the same way as the upper strata without having the physique du rôle, without having certain innate attitudes, but by vulgarly mimicking them. An empirical proof of the trickle round mechanism is Silvia Bellezza's paper (Bellezza and Berger (2020)).

3) The third empirical observation the central argument of the paper stems from is that there are different micro-languages between different social strata. it is still true that *"modern beautiful design objects are subtly created not to be understood by the majority, at least not immediately, their first role is to be signs of distinction, objects that will distinguish those who are able to recognise them, the others will not even see them"* Baudrillard (2016b). Or alternatively, as Bourdieu writes: *"Habitus is both a system of schemes of production of practices and a system of perception and appreciation of practices. And, in both of these dimensions, its operation expresses the social position within which it was elaborated. Consequently,* habitus *produces practices and representations which are available for classification, which are objectively differentiated; however, they are immediately perceived as such only by those agents who possess the code, the classificatory schemes necessary to understand their social meaning.* Habitus *thus implies a "sense of one's place" but also a "sense of the place of others"*. Bourdieu (1989). The social fact that there are different codes of understanding goods and services is not only related to innate individual matters of taste and character. Social regularities can be found in the decoding of goods and services, although

these regularities are not necessarily related to social classes. In this sense, the difference in the languages and micro-languages of consumption is a point in favour of recovering a certain determinism typical of post-structuralism, or at least the tendency towards the latter as the aim of consumer research.

4) To say that post-structuralist theory is only and solely deterministic is a way of simplifying and dismissing it. This idea is based on the Bourdieu's attempt to link the marxian social structure with the judgments of taste. Taking a post-structuralist vision into account would requires more analytical effort than the 'everything is valid' that characterises the consumer as sovereign and free creator of meanings. In particular, I want to argue for the importance of the researcher's interpretation in trying to understand the unconscious aspects of consumption as a social process. I am not arguing that the interpretations of the two French authors were correct in general, but that an analytical effort to understand or at least interpret in an original way manifest, obvious and taken for granted behaviour is important. If all consumers are free and sovereign to create all the meanings and interpretations they voluntarily want, then there is nothing more to be said about consumption, neither of its link with production, nor of its symbolic power, nor about the way it regulates relations between people (Schor (2007)). Marx already noticed this capacity of the commodity to regulate social relations: *"However, let us remember that commodities possess objectivity of value only insofar as they are expressions of an identical social unit, of human labour, and that therefore their objectivity of value is purely social, and then it will be obvious that the latter can present itself only in the social relation between commodity and commodity"*; or besides: *"While the relative form of value of a commodity...expresses its being value as something quite different from its body and its properties [use-value].... there is a social relation hidden in it...it is implicit in the infinite series of its expressions that the value of a commodity is indifferent to the particular form of use-value in which it is presented"*. When speaking of the link between the presupposed equality of men and social relations he writes: *"The arcane expression of value -that is, the equality and equal validity (equivalence) of all labour, because and as human labour in general- can only be deciphered when the concept of human equality already possesses the consistency and tenacity of a popular prejudice. But this is only possible in a society where the commodity form is the general form of the product of labour, and thus also the reciprocal relation between men as possessors of commodities (who produce and exchange commodities-) is the dominant social relation"* Marx (2018). While what we have all too often taken with us from Marx's theory is only the idea of the economy as the determining instance of history, but we have taken it with us by degrading his idea: by transforming the idea that capital is a historically constituted social relation into the idea that the economics is the basis of every geopolitical move and of history, we transformed his idea into an economistic metaphysic.
The famous passage in Volume 1 of Capital reads: *"The arcane of the commodity form thus consists simply in the fact that this form, like a mirror, restores to men the image of the social characters of their own labour, making them appear as objective characters of the products of that labour, as natural social properties of those things, and thus also restores the image of the social relation between producers and overall labour, making it appear as a social relation between objects existing outside of them producers. By means of this* quid pro quo*, the products of labour become commodities, sensibly supersensible things, i.e. social things"*. The same applies to the sign-form, if perceived as objective. Fashion from this point of view is the largest (but not the only) industry of objectivation of the sign-form and of its interpretative code.

5) The monopolisation at the top and redistribution of social meanings born "from the bottom" (subcultures) is a process that row against the idea of the postmodern emancipated consumer. Firstly, it is a process of monopolisation of meaning and thus of induced and revisited interpretation of the signifier, perception and classification's categories. Secondly, it neutralises and reifies the underlying social relationship, it abolishes it from the moment it codifies it.

6) Goods and places of consumption are increasingly designed according to the imaginary they want to seduce, they increasingly leverage the sign value and the emotional aspects linked to it (Vanni Codeluppi). Algorithms are a means of adapting the offer to the consumer's imagination. Furthermore, the media are

powerful creators of images and therefore of imagery (in various aspects they substitute the imagination): there is a form of circularity in the functioning of media and consumption. The consumption-media integrated circuit is a reproductive channel of society, through which the society the algorithms study is reproduced, and goes hand in hand with cultural cloning (including opinions on social issues). But above all, the individual, isolated subject is reproduced: all our individualism, the subject of conscience and private property, the subject deprived of its inner otherness, i.e. an autistic subject, is the presupposition of our current society (in this key of interpretation, covid-19 and the consequent virtual relationship with the other is not an extraordinary event, but an ordinary one) and takes on the force of reality also thanks to the consumer-media circuit and the virtual nebulosa that everyone has around him.

## 1.4 Conclusions

If there is a freedom of the consumer, it consists in non-sense, in the absolute emptiness of meaning (not even that of functionality), in not knowing what one wants and thus in a radical relativisation of code and value. Not in the postmodern idea of freedom and the appropriation of combinatory and signifying practices (mixing different styles, for instance), because this takes place within a frame (in the sense of Kahneman and Tversky (2013b), Kahneman and Tversky (2013a)) of pre-established representations, or rather, of representations that are at least communicable and thus rest on a shared code. This is also the case with political positions on social issues. In conclusion, I argue that consumption exercises forms of symbolic violence https://web.archive.org/web/20080513043250/http://www.emsf.rai.it/interviste/interviste.asp?d=388 from the moment an arbitrary code is lived as legitimate. It contributes to the impoverishment of semantic encyclopaedias and processes of signification operating within social culture and to the neutrality (indeed, complementarity with production) of potentially subversive practices.

In particular, the consumer is free and active in the post-modern sense to express himself through the semiological system of consumption, but this semiological system, whatever the consumer's 'critical' choice in front of it, has already fulfilled its ideological function: it has already reduced every symbolic (and therefore ambivalent) possibility of expression of the subject, it has already deprived the subject of the symbolic means of expression, precisely because it is a code, as a social instance: it says 'do you want to be transgressive? Here are the means. You want to be sexy? Here are the means'. It has already provided the subject with a positive, positivist way of expressing a certain value. The ideology consists in taking for granted, in believing in the value (actually as arbitrary as the linguistic sign) that is expressed through that code in various declinations. There is a fine definition of ideology in *"For a Critique of the Political Economy of the Sign"*. Baudrillard and Dalla Vigna (2010), it would consist in the semiological reduction of ambivalence. That is, something that in itself is ambivalent is invested with an arbitrary sign value. Reduction of a symbol to a sign. Let us give some examples of this ideology: the sun. It no longer has anything of the symbolic function it had for the Aztecs or the Egyptians, that is, the ambivalence of a natural force both in primitive cults and in peasant work, death and life together. It becomes an entirely positive sign, euphorising and significantly opposed to non-sun, rain, etc. From this it functions as an ideology and as a cultural value in a system of oppositions, the hyperbole of which, could be a 'right to the sun'. It is in this sense that Bourdieu in a famous interview quoted above says that *"After all, the form par excellence of symbolic violence - it is terrible to say it - is precisely a certain use of human rights"*.

Another example: the masculine and the feminine. Nobody by nature is relegated to one sex, sexual ambivalence is at the core of every subject, sex can be inscribed as an organic difference in the body, not as an absolute term linked to the presence of an organ. But this deep ambivalence must be reduced because it escapes the social and sexual order, which gives rise to a cultural model that separates the sexes and then privileges one of them. Let me make a brief aside: if you think about it for a moment, this is also the case with the media and social issues fed to the 'masses'. Information has all the answers, but they are answers to questions that we never asked and certainly are not even interesting. In this way it urges

us to take a position, which lately is often dichotomous, and then socially 'privilege' one over the other: the non-sovereignists privileged over the sovereignists, the non-populists over the populists, the pro science over the no vax, the people in favour of sending arms to Ukraine over the pacifist (the latter case with some differences from the others, since being pacifists cannot be denigrated more than that for obvious reasons).
A final example of ideology as semiological reduction: the nudity, that has been proposed by the mass media (TV from 70' onwards, in Italy) as a "discovery" of the body and of the sex, as a libertine expression. This nudity claims to be rational and progressive, that is, to rediscover the "truth" of the body and its "natural" reason. But the symbolic and sexual truth of the body certainly does not coincide with the nude in this naive sense, but (as Bataille's *Erotism: death and sensuality* or Botticelli's Venus express), with "laying bare", because this is the symbolic equivalent of a putting to death, and therefore the true pattern of an always ambivalent desire: love and death together. Modern nudity does not imply this ambivalence, this deep symbolic value, because it concerns a body transformed by sex (as a cultural value) in an entirely positive value, in a model of realization, in a moral (or in a playful immorality, which is the same thing). This nudity never refers to a divided body, split by sex. The modern sexual body claims only its positive aspect, namely: 1) The need and not the desire. 2) The satisfaction and not the negativity, the lack, the death and the castration. 3) The right to the body and to the sex: the social subversion of the body and of the sex are schematized in a democratic claim, obviously quite formal, which concerns rights (to the body in this case).
At this point, once the ideological process has liquidated the ambivalence and the symbolic function of nudity, it can reorganize everything into a semiological system of distinct and opposite sign values. Nudity becomes a sign among others and significantly is opposed to the dress or to the see-through effect. So even if this nudity is presented as "liberating or libertine", as a matter of fact it is only a sign variant that can easily coexist with the dress (or non-nudity) in the fashion's game and can perform its function in the alternation between nudity-non nudity. A nudity reduced to a sign and involved in the game of differentiation through them, and not that one linked to *eros* and *thanatos*. What is important to note is the following fact: the condition through which it is able to function ideologically is the loss of the symbolic content and the overloading of the semiological one. This reduction of the symbolic field by the semiological one defines the ideological process. This is exactly the ideology that lies behind consumption as a code, behind objects as signs and to which consumption itself (as an institution that you are faced with in society) educates.
In this sense, the meanings of consumer goods, health, beauty, sexuality and so on, are models of simulation ready to be used and where the consumer's creativity and freedom can be expressed in the combinatorial practice of the elements. But this is precisely simulation, since the meaning is detached from the referent, it is produced (in the double sense of the word, manufactured and brought as proof) and available on the market.
I also argue that consumption simplifies semantic encyclopaedias. I will take some practical examples to understand how this code of signs simplifies the language operating within social culture. The "antico Vinaio" is a sandwich seller who made his fortune starting out in Florence, working especially with tourists. In advertising himself on social media, he evidently uses 'Tuscanity' to characterise his product. Now this Tuscanity is indeed a meaning, but it is also an expressive code, a myth. From Levi-Strauss onwards, we know that myths do not only form a content that circulates in societies, but also a code, a classifying principle. In the distribution of cultural capital in the population, some will recognise this connotation of Tuscanity as crude, artefactual; and for others, it will instead *be* the Tuscanity, the interpretation of the signifier gets used to being naive. This should already make it clear how the code of consumption and sign-objects strongly simplifies the languages operating within social culture and is tied to its structure. This is in line with the influence American culture has on our culture: Americans are a highly naive society in this respect, they believe in simulacra.

*"In storing details on their computers of all the known souls in the civilized (white) countries, the Mormons of Salt Lake City are behaving no differently from other Americans, who all share the same missionary spirit. It is never too late to revive your origins. It is their destiny: since they were not the first to be in on history, they will be the first to immortalize everything by reconstitution (by putting things in mu-*

*seums, they can match in an instant the fossilization process nature took millions of years to complete). But the conception Americans have of the museum is much wider than our own. To them, everything is worthy of protection, embalming, restoration. Everything can have a second birth, the eternal birth of the simulacrum. Not only are the Americans missionaries, they are also Anabaptists: having missed out on the original baptism, they dream of baptizing everything a second time and only accord value to this later sacrament which is, as we know, a repeat performance of the first, but its repetition as something more real. And this indeed is the perfect definition of the simulacrum. All Anabaptists are sectarian, and sometimes violent. Americans are no exception to this rule. To reconstruct things in their exact form, so as to present them on the Day of Judgement, they are prepared to destroy and exterminate - Thomas Münzer was an Anabaptist.* Baudrillard (1989).

The current fact that when we talk about the Russo-Ukrainian War we must make initial disclaimers about who is the attacked and who is the aggressor is still linked to this ingenuity of the signification process. Everywhere the usual symbolic mortification. But more generally, the whole sphere of "politically correct" resorts to this mechanism of identity designation through signs, of which consumption has been and still is, a pedagogy. This pedagogy when it binds to the acceptance and relationship with the opposite sex (or the same one) becomes a real anxiety to learn. And, to conclude on political correct: what is more politically correct than an unconditional respect for life as a positive value?

Another practical example I mentioned above highlights instead the operation of neutralising social meanings once they have become simulacra. It is well known that the trap style, like the hip hop, was born as a subculture and became mainstream. Some authors see in this transition an increase in the political potential of hip-hop (Stapleton (1998)). I here argue the opposite, namely that a sub-culture becomes mainstream when this monopolisation and redistribution takes place that transforms it into a simulacrum, neutralising even its possible subversive charge.

The trap originated in the south of the USA as an expressive need of groups of people who were living on their skin the contrast of values between starting from scratch, from the street with all the inequalities in terms of opportunities that this entails, and the American dream ambition materialised through signs of wealth such as gold jewellery, diamonds or luxury cars. As long as this cultural manifestation, whatever aesthetic judgement we have, was linked to a historical and anthropological reality, it could still be considered a sign with a referent. In 2009/2010, artists such as Gucci Main and Young Jeezy cleared customs for the sounds and rhythms of trap, which became mainstram, embedded in pop melodies, summer tunes. Important fashion companies such as Gucci and Balenciaga started to create product lines that (albeit with different declinations among them and different from the original one) recalled the trap lifestyle values. This is what I mean when I speak of monopolisation at the top of a social meaning (even one born from below, a sub-culture) and redistribution. Such redistribution is not innocent because it detaches the sign from its referent, makes it a simulacrum, thus not false, but overloaded with meaning. At this point, let us take a concrete example: a boy who wants to express transgressivity (but one could also say other meanings) is faced with a ready-made model of simulation of transgressivity. He does not write a poem or challenge the ideology behind his teacher's lecture, or at least, he does not necessarily do that either. He may stop at the model of simulation of transgressiveness offered by the production system and accept all the contradictions of the worker condition or the symbolic violence of the pedagogical relationship.

One could give another example: bagged salads contain amounts of disinfectant and plastic residues within the law (Allende et al. (2008), Gil et al. (2016)), yet they can be considered healty food. Some critical consumers with a specific cultural capital will be able to judge and choose, while others will not: they will take those salads thinking they are healty (some really will be, but that is not the point). For this second category of consumers is evident how the good/service functions as a simulation field of (referent-less) healthy meaning (the same goes for green unfortunately). In this last example, the good-sign is not only a simulacrum (overloaded with meaning), it is also false, as in standard Marxist analysis. More generally, since life has a positive value and health becomes a good, a hysterical and psychopathological culture of health around medicine has been inaugurated. What I am proposing here is that no one has the right to

life or to sexual pleasure, let's leave this form of legality to the liberated slaves.
In this broad sense, as communication system, consumption is a field of simulation that contributes both to the impoverishment of semantic encyclopaedias operating within social culture and to the neutralisation of potentially subversive cultures (or sub-cultures). This occurs through the links between consumption, production, and social structure defined according to the various forms of capital identified by Bourdieu, and through the differences in languages (semantic encyclopaedias and vocabularies of terms) theorised by Eco and Semprini.
Adopting a theoretical and historical perspective, one sees a continuum between consumption as a field of simulation and the continuous 'Vetrinizzazione' as Vanni Codeluppi puts it, or the portable confessionals that Bauman talks about (mobile phones) with regard to social networks. In the sense that consumption has accustomed us to the practice of simulation, until we realised that in social networks we simulate more and better, the factitious component of social meaning is, if possible, even greater. So if we look at consumption as a simulation field (to which we certainly cannot entirely reduce it) we see this line of continuity between it and the 'vetrinizzarsi', which by the way is also demanded to the academic researchers. In general, the social injunction to produce oneself and have nothing to hide, no secrets, is in line with the simulation of identity through consumption's signs. Fundamentally it is the same thing, a prescribed freedom, it is this continuous intimation, this admirable metaphor of the void to be what one wants and want what one is. But in the case of its virtual version, the simulative power of the *device* is immensely greater, even more intransitive (no physical contact, exchange of glances etc.) and individualistic (it is almost about an autistic subject, isolated in its virtual nebulosa) than that of standard consumption.
Basically, I mean that consumption as a communicative form, as an ideology of semiological reduction of the ambivalence and socially founded language, has only prepared the ground for the social culture of talking to everyone and oneself all the time. To that continuous violence done to the depth, to the individual being, to its secret.
Much of economics, with regard to consumption, did nothing more than 'naturalise' the cultural system underpinning our societies, averting change and discouraging it implicitly, which is always more effective than doing it explicitly (as conservatives do); in this regard, the 'unspoken' plays a key role compared to the 'explicit' in our social culture.
I will give one last example, which shows that the logic of consumption is much more widespread than we imagine.
In economics department (but perhaps more broadly, in various social science departments) there is a whole ideology of objectivity, of science as opposed to rhetoric and philosophy.
We note that even in this artificial opposition one of the two terms (science) is always favoured, while the way rhetoric and philosophy are spoken of is often derogatory, at least implicitly.
For example: yesterday (12/05/2022) after the presentation of the interesting book 'the privatisation of knowledge', professors were discussing the fact that not all professions work for money. *"It is evident that doctors do not only work for money"* said an IMT professor. The first thing that came to my mind was that there are individuals who are doctors for prestige or the prestige-money mix. If we want to put it less simplistically, we can replace the word "prestige" with "social position" (at least in Bourdieu's forms of capital) and money with the tranquillity of a comfortable life. Instead, I took into account my (subjective of course) judgement of the interlocutor and said *"there are also cosmetic surgeons"*. Because the latter have no objective excuse, they do not work to save lives (perhaps save minds?). Actually observing society, I could have said much more: 1) there are doctors who have chosen the profession for the social position it implies (although some disappointed, ex-post). 2) There are doctors (or nurses and many other categories aimed at 'helping their neighbour') who want to build up an image of themselves, they need the signs of altruism, the signs of being left-wing and so on. 3) There are doctors, the ones I prefer of course, who are altruistic in the absence of signs of altruism; who only from a practical and concrete point of view help their neighbour. They want to help, they know how to do it and they do it, it ends there. They do not designate themselves (in the sense of *design*). 4) Finally, there is a mix of these modes. And these are only the conscious aspects of the choice. But I preferred to say *"there are also cosmetic surgeons"* because

they have no excuse (I am not talking about reconstructive surgery), 'objectively' in the meaning (which I assumed) of my interlocutor, they do not act to cure or save lives. Therein lies the ideology of objectivity in universities, in these unconscious dispositions towards an arbitrary idea of objectivity (that nowadays are an *habitus* for scientists) and refusal of "humanistic" arguments. If we talk about consumption with this idea of objectivity in mind, thus avoiding interpretation about the reasons for choices, we will never come close to understanding the problems of inequality (Mary Douglas). This very ideology of objectivity causes it to be postulated as the basis of consumption choices; this severely limits the view of its social impact. Points 1 and 2 of the example above (and the very same *habitus* of considering "scientific" only some arguments) show how the logic of consumption, understood as the appropriation and manipulation of social meanings, (which is its social definition according to the paper's thesis), has invaded other fields, not too 'scientifically' studible unfortunately: I wish it were that simple.

Consumption is a social process because follows a logic of appropriation and manipulation of social meanings and production of signs. In a word, it follow a logic of simulation. And it is precisely as an *habitus*, as pedagogy of simulation, that it has extended to other fields, from the political one to the representation of the self in everyday life.

However, the rationalisation of society as Weber understood it, today consists of relegating a whole series of codified social meanings to the unspoken and making 'speakable' and analyzable as accepted argument only objective things. But society are also organized around mythical codes, far away from objectivity, and our society does not escape this rule. This attitude towards an objectivistic vision of social facts (In Italian "fact" is the past perfect of "to do", this should induce some question on the artificiality of, at least, social facts. But one could argue that even an earthquake is a social event from the moment when what matters is the effect and reaction to it of the social body) seems more an hope of certain scholars or a performative act. But the masses punctually dispel this vision by idolizing the game of signs: fashion is more than what the sociology of distinction will be able to say, it is a collective passion.

The entire logic stated earlier (of the appropriation and manipulation of social meanings), which is what I claim to be the logic of consumption, is relegated to the unspoken, while manifest discourse (political, social, etc.) is tied to an 'objectivity' of the social itself. This fetishistic and ideological view of objectivity strongly precludes the possibility of social changes. In this way, on certain issues such as inequality, we fight on ground lost from the outset.

This is why I believe it is important to take up the post-structuralist vision of consumption, not to create a general deterministic theory, but to rediscover the links of the sociology of consumption with a Marxist and semiotic vision in today's society, to recognise the ideology and total relativity, hence the possibility of change, in any cultural system.

# Chapter 2

# An agent based model of fads

**Abstract**

Many authors of different fields and ages have recognized that the internal dynamics of the economy leads to forms of instability. This paper partially explains this instability on the demand side by providing behavioral motivations of heterogeneous agents. Modifying an existing model I use simulations techniques in order to investigate consumption dynamics when agents have an attitude towards conformism and distinction (necessary conditions for fashion in Simmel) at the same time, using goods as elements of a communication system. Results challenge that economic theory stating that conspicuous consumption is typical only of a wealthy class and of some positional/luxury goods. Indeed in this model there is no assumption about objective features of goods or income distribution(just a form of fractionation expressing the fact that not everyone can buy any good). On the contrary, I argue that relegating the phenomenon of signaling consumption to narrow categories of goods and a wealthy class is an ideological operation. My contributions with respect to the existing literature are: 1) a weaker sufficient condition for goods' cycles. 2) An application to the particular case influencer-followers, exploring parameter interactions. 3) A systematic analysis of the interaction space between the two behavioural parameters with respect to the cyclical or equilibrium path they produce in the case without the influencer.

***Keywords***— *goods cycles, agent based model, sociology of consumption.*

## 2.1 Introduction

This model questions all those categories and theories distinguishing between consumption of luxuries and standard goods or primary and secondary needs, relegating the mechanisms of cycles to some fashion dynamics of a wealthy class. These theories start from intrinsic and objective characteristics of the goods (or quantifiable wealth). In the following research I want to emphasize that it is sufficient to introduce in consumers' utility function two banal behavioral elements to observe cyclical fluctuations with no equilibria. It is not necessary to divide the goods between luxury and non luxury, the same good can be used as a prestige sign by one subject and for the use value by another one. This is the model's results interpretation. In order to build the model I start from Simmel's thesis Simmel (1957) about conformism and distinction as necessary conditions for fashion.
The result may seem a counter-example to Simmel's conclusion, but actually it depends only on the interpretation given to the concept of social distinction, as I better explain in the conclusions. Anyway Simmel's book is important only as far as it suggested the behavioral elements entering the utility function of my model, I do not want to test his thesis in this paper.
The issue of consumption used to signal social status and possible explanations of fashion cycles have been extensively treated in the literature. There are several papers showing that the phenomenon of social distinction through consumption practices is not only characteristic of a wealthy class and of a restricted set of luxury goods, but also the poor and the middle-class consume conspicuously/signalling. This economic literature is both theoretical Moav and and Neeman (2012), Moav and Neeman (2010) and empirical/experimental. Part of this literature strictly belongs to the economics discipline: Charles, Hurst, and Roussanov (2009), Fafchamps and Shilpi (2008), Murphy (2018), , Guillen-Royo (2011), Kaus (2013), Ordabayeva and Chandon (2011), Chen and Nelson (2020), Wisman (2009) and Sundie et al. (2011), and part concerns business, management or marketing fields: Bellet and Colson-Sihra (2018), Jaikumar and Sarin (2015), Mazzocco et al. (2012), Podoshen, Andrzejewski, and Hunt (2014).There are also development studies addressing this issue: Van Kempen (2003), Van Kempen (2007). And books enlightening the life-style choices of the poor are often determined by factors that escape the logic of the market economy: Harriger (2010), Duflo and Banerjee (2011). Some of these authors call this kind of consumption *aspirational* to stress the fact that, differently from the classic concept of conspicuous consumption, here there is nothing to signal in terms of wealth (since only the very poor people are taken into consideration). In the end these categorization are just abstractions, unable to grasp in an unique category the variety of meanings given to goods/services by people.
The driving idea of the paper comes from the literature reviewed, the sociology of consumption and the observation of reality.
In other words I want to highlight that the social game of distinction and the goods cycles related to it are not a phenomenon relegated to a wealthy class and therefore secondary (as far as minor) compared to many others socio-economic phenomena. Even among the less wealthy classes or social strata (especially those seeking social advancement) phenomena linked to the sociological concept of distinction can be observed. The main contributions to the literature I provide are resumed in the abstract. This paper modifies the mathematical structure of Tassier (2004), which serves as a starting point to begin my paper's analysis. The only thing I keep is the mathematical structure of the utility, with a slight modification. As stated above, the interpretation, the analysis/measures of the parameters' space and the influencer case, are novelties that completely deviate from the model of Troy Trasser.

In the sociological perspective consumption is extended to an entire Western culture as one of the biggest mass-communication system; and is problematized in very complex ways, which cannot be summarized in a simplified model like the following.
Sociologists indeed began to talk of *consumer society*, suggesting that consumption became a way of expressing one's identity and finding one's position in a stratified society (connotating lifestyles, entering people representations and acting as a language) Codeluppi (2005). In this perspective consumption is no

longer something that concerns only a wealthy class (as in Veblen's times) but is widespread in society as a mean of expressing themselves, even in relation to the job-market (Fremling and Posner (1999), Stewart and Hoell (2016)). Some authors considered it an ideology because the meanings attached to goods are institutionally imposed (G. McCracken (1986)), as well as arbitrary in the sense of Saussure (without any logical relationship between signifier and meaning). Anyway there is an open debate on this meaning movement (top-bottom or bottom-top) that is not of our interest here.

In the light of these theories, not only luxury goods, but many other more accessible categories of goods convey the most disparate social meanings, and not just prestige or status. This is the reason why sociologists dealt with the link between consumption and identity in contemporary societies.

The research question of the paper can be summarized as: "are fashion cycles a minor phenomenon in the economy, involving luxury or positional goods and only a wealthy class?" The answer of the model's simulations seems to be no: fashion cycles can be extended to a wider range of goods and agents than the traditional luxury goods-leisure class combination. And this is true even with two simplistic and banal behavioral elements (they belongs to an old sociology) in the utility function.

In order to explore this consumption dynamic I insert the behavioral parameters into an agent based model framework. This framework has several advantages with respect to the mainstream representative agent one. Caiani et al. (2016). One is that it relies on much a less intrusive abstraction scheme, so it is more suitable to represent reality without prejudice, at the cost of an higher complexity.

As Bargigli et al. (2020) pointed out one of the advantage of ABM models is the limited number of theoretical restrictions *"Some final considerations are necessary at this point. Aggregation is a long standing issue in economic theory. In the case of mainstream macro models, the gap between micro and macro is bridged by imposing ex ante strong theoretical restrictions, such as doing away with agent heterogeneity, which allow to derive a mathematical representation of the macro variables directly from the micro model. ABMs instead generally lack analytical solutions, and most ABM modelers are not in favor of selecting their assumptions on the basis of analytical tractability"*.

I provide some analytical solutions in a very simplified version of the model, in order to explore its basic properties. Then I study the true model numerically.

I assume that heterogeneous agents have a personal tendency to distinguish themselves and to conform at the same time, using goods as element of a communication system. In this way they cause fashion cycles (if distinction prevails) or they get clustered into stable groups (if conformism prevails). The first thing I do is to reproduce a result already present in the literature (Tassier (2004)) with a slightly different condition: Tassier (2004) normalizes the parameters and assumes that all the agents give the same "weight" to the distinction (and consequently the complementary weight to conformism). Therefore in his model agents are not heterogeneous with respect to the weights, but they are so in other respects. In this model instead I am able to obtain cycles assuming that all the agents give a weight close to zero to conformism and I leave free the parameter of the distinction's weight, so that agents are heterogeneous in that respect.

The paper is organized as follows: the next section presents a brief literature review about fashion cycles. Section 3 concerns the theoretical model and the analytical solutions of the simplified version. Section 4 instead shows the simulations results and the particular case influencer-follower. Section 5 includes the sensitivity analysis and metamodel identification. Section 6 concludes and discusses some possible further developments of the paper.

## 2.2 Related literature and methods

The fact that some goods are conspicuously consumed does not necessarily imply that they are luxury goods, but it may concern psychological and cognitive attitudes of the agents Banuri and Nguyen (2020), or/and their reference group Barrington-Leigh (2008). The same good can be a luxury good for one agent and a "normal" good for another. For instance there are cases where price means quality for the agent, or cases of *hot hand fallacy* and gambler's heuristic (Johnson, Tellis, and MacInnis (2005)), both cognitive biases. A good can become a luxury good also depending on the way and the context where it is bought and used: to convey a meaning about your identity to another person (or group) for instance, or to show that in certain situations you do not care about the price and so on and so forth. A sociological argument against the division luxuries/non-luxuries according to objective features of the good, is that some goods are luxuries for those at the bottom of wealth distribution are absolutely not distinctive for those at the top of wealth distribution, and the same is true substituting in the previous sentence the word "wealth" with the string "cultural capital" (Bourdieu (2018)).

I hope I have argued sufficiently the features of luxury goods cannot only be related objectively to intrinsic aspects of objects, but they pass through a social determination, arbitrary and uncertain.
A cornerstone contribution for economics on this topic comes from Duesenberry (1949) and relative income hypothesis exposed in that work, Duesemberry strives for understanding the way people consume and perhaps this idea has been too soon abandoned by economic theory.
One of the first works in the same spirit as mine is Leibenstein (1950), where the author finds that in the presence of diminishing marginal external consumption effect (beyond a certain point the incremental increases in the demand for the commodity by others have a decreasing influence on a consumer's own demand), the band-wagon effect makes the demand curve more elastic, while the snob effect less elastic. The former refers to the case when demand for a commodity increases if others are increasing the consumption for the same commodity, the latter to the opposite situation: demand for a given good decreases if the others are increasing consumption of that commodity. Without Veblen effect the demand curve is negatively inclined regardless of which of the two effects prevails (band-wagon or snob one). In conclusion according to Leibenstein (1950) only the snob effect and the Veblen effect together would justify the assumption of positively inclined demand curve. Taken alone these effects are necessary but not sufficient conditions.
Corneo and Jeanne (1997) found different conditions for upward sloped demand curve and tried to draw some policy implications. They showed *"that bandwagon and snob effects can be related to the social norm that governs the allocation of status"*. And that the market demand curve for the conspicuous good may exhibit unusual properties; in particular, it may be upward-sloping if consumer behavior is conformist. The main policy implication is that taxing conspicuous expenditures may turn to enlarge the market for these goods, and diminish the welfare of everybody. Conspicuous spending may be socially desirable when it takes the form of a gift to the community: the desire to achieve status may overcome the problem of free riding on the provision of public goods.
Following Simmel (1957), Di Giovinazzo and Naimzada (2015) contribute to the literature endogenizing preferences that evolve from the interaction of 2 types of agents (snobs and bandwagon). Their paper according to the same authors, closely adhere to the Simmel's essay (1957). The main contribution of Naimzada and Di Giovinazzo is showing that the endogenous nature of preferences and social interaction is a precondition for setting off the cycles of fashion.
Bilancini, Boncinelli, et al. (2009) found that if status depends in an ordinal way on individuals' relative standing in terms of economic resources, then redistributing resources from the rich to the poor decreases social waste (defined as any expenditure in conspicuous consumption) if pre-taxes inequality is low enough. If, instead, status depends in a cardinal way on individuals' relative standing, then the relationship between pre-taxes inequality and change in waste (wasteful status consumption) is non monotonic. There are cases where a self reinforcing mechanism is triggered whereby more conspicuous consumption induces greater weight given to the social status.
Pesendorfer (1995) created a fashion cycle model where a monopolist periodically creates a new design (when enough consumers own the old design). The author provides conditions under which all consumers might be better off not caring about the fashion mechanism. The competition between designers (instead of a monopoly situation) would reduce the frequency of new designs (and therefore of cycles) and raise the price compared to the monopoly price.
From Tassier (2004) I draw my utility function with some modifications. In his model there are different types of agents and different level of attraction for each of them. He measures the average type that buys

a certain good, the influence of the price mechanism on the cycles' magnitude. Finally he showed that increasing the number of goods increases the time agents need to reach a type-based clustered equilibrium and decreases the probability of reaching such equilibrium.
Johnstone and Katz (1957) found that preferences in popular music among teen-age girls vary according to the neighborhood in which a girl lives and her relative popularity among her peers; and suggest that personal relations play an important role in musical fads and fashions.
One of the most important model about this issue is the paper by Matsuyama Matsuyama (1991), a random matching model where the equilibrium depends on the relative share of conformists to non-conforimsts. He basically distinguished between two cases, one referred to the trickle down theory, the other one to the collective selection theory, and he built a model representing the latter. The two theories differs as the former is linked to the class structure of society, the second one to the mass consumption that we observed since the middle of the last century.
Acerbi, Ghirlanda, and Enquist (2012) shows that the social transmission of preferences for cultural traits is a sufficient condition to achieve fashion cycles. They identify a "success index" that predicts how much a fashion (or a trait) will spread in the population. The numerator of this index is the ease with which a trait is transmitted. On the other hand, since individuals have many occasions to learn new traits and replace the existing ones, denominators of the cultural success index measures the resistance of traits in being relinquished (how easily individuals abandon a trait).
Frank (2005) argues that a consumption theory must conciliate three basic patterns that seems to be contradictory (at least the first two): the rich save at higher rates than the poor; national savings rates remain roughly constant as income grows; and national consumption is more stable than national income over short periods. The author describe some examples suggesting that James Duesenberry's relative income hypothesis was abandoned prematurely by economics and that he actually explained the contradiction stated above saying that poverty is relative. Duesemberry indeed explained that poors save at lower rates because the higher spending of others kindles aspirations they find difficult to meet. Frank (2005) discusses the reasons why James Duesemberry's theory was abandoned by economics. The papers of M. S. Granovetter (1973), Simmel and the sociology of consumption as a whole offered a much relevant sociological starting point for the reasoning behind the paper.
The methods I use are basically simulations in pyhton and some brief analytical results. For the sensitivity analysis I exploited the pandas package to export data in excel and use them in Rstudio to perform the sensitivity analysis.

## 2.3 The model

$N$ = number of agents Each agent i has 2 features:

- $T_i \in [0,1]$ is the type of agent $i$. One type corresponds to one number, there is the possibility that two or more agents are of the same type. Conformism is represented by the following mechanism: the higher is the distance from those types having the same good as you (your group) the lower is your utility. I consider 2 decimals so there are 100 different types.
- $D_i \in [0,1]$ which indicates the level of distinction of agent $i$. If $D_i > D_j$ than $i$ is more attractive than $j$ for every agent in the population $N$. The higher is the average distinction of a group the higher is the utility of owning the good placing in that group.

Each agent $i$ has an available store of money $m_i$ at each period. The mass of money is randomly drawn for each agent in a closed interval: $m_i \in [6, 50]$. Once it has been drawn at the beginning of the simulations it remains the same in the following periods, so it can be considered as a kind of income assigned to the agents (spending capacity) and that does not change in time. Agents actually do not spent these money, the mass of money is just the number agents utilities start from. The interval is chosen considering that the maximum price is $\ln(1001) = 6.908$. So there are some agents who cannot buy a good owned by more than 403 agents (there is no negative utility), since $\ln(403) = 5.99$. This is a way of representing the fact

that not everyone can buy every good. The right side of the interval instead is a way of representing the existence of the very rich people, but it does not affect their capacity to buy a given good, as far as their income is above $\ln(1001) = 6,9087$ they can buy whatever good they want. The only thing $m_i$ affects is the level of utility an agent is starting from. There is no saving in this model.
Every agent is initially endowed with a given good and at each period an agent is randomly drawn and receive the opportunity to buy a new good.
There are $G$ goods $G = 1, 2, \dots, G$ that are functionally equivalents, for instance different types of trousers. $Q_g$ is the number if agents owning good $g$ and the marginal cost $C(Q_g)$ is an increasing function of $Q_g$ (for simplicity the cost function is the same for all goods). We are in a perfect competition situation so that $P_g = C(Q_g)$. The higher is the number of agents owing good $g$ the higher is $P_g$ ($P_g' > 0$).
Price is determined simultaneously with the choice of agents. The price function in the simulations is $P_g = ln(1 + Q)$. This function must increase as slow as to satisfy inequality number (3). Each agent must own one of the $G$ goods, the good owned by $i$ is denoted as $g_i$ The group of agents owning $g$ is $N_g$ and the number of agents owning $g$ is $|N_g|$. If an agent buys a good he enters the group of those agents owning that good, so groups are defined endogenously in the model and the number of groups is $\leq G$, strictly lower if some good is not owned by anyone in the population.
The utility each agent maximizes is given by the Cobb-Douglas preferences:

$$\begin{aligned} \max_{g \in G} \quad & (m_i - P_g)^{\beta} V_{i,g}^{(1-\beta)} \\ \text{s.t.} \quad & m_i - P_g \geq 0 \end{aligned} \tag{2.3.1}$$

Where $V_{i,g}$ is the network value or social value for agent $i$ of owning good $g$ and is given by

$$V_{i,g} = \frac{\sum_{j \neq i \in N_g} (1 - \alpha_{i,t})(1 - |T_i - T_j|) + \alpha_{i,d}(D_i + \sum_{j \neq i \in N_g} D_j)}{|N_g|} \tag{2.3.2}$$

$\beta \in [0, 1]$ is a weight given to the monetary part of the utility. And $1 - \beta$ is the complementary weight given to the network value of the good. It expresses the importance given by agents to the monetary and social part of utility respectively; and it is homogeneous across the agents. $\alpha_{i,t} \in [0, 1]$ and $\alpha_{i,d} \in [0, 1]$ are preferences parameters of agent $i$ for having similar types and an high level of average distinction in his/her group.
Please note that also the distinction of agent $i$ himself/herself enter his/her utility. This is a way of formalizing the idea (which is a simplification of reality) that agent $i$ actually knows which his/her own contribute in terms of distinction to the group she/he is going to join buying a specific good. And it is also a way of allowing agents to buy goods not owned by anyone, otherwise there would be a problem in the determination of the utility when agents are alone (and *proposition 2* would not hold anymore). One might also think that the complete asocial agent earns 0, but this is not a situation I want to model. This compromise is a simplification of reality that allows the model to formally capture narrow social dynamics.

## 2.4 Some analytical results

Under parameters' restrictions the model provides some analytical results that may be useful to understand its basic properties. These results are valid both in the Tassier (2004) model and in mine, it is important however to report them because they give an idea of how the model works and what are the driving effects in agents' interaction.

When agents have the same $m_i$ $\forall i \in N$ the following propositions hold:

**Proposition 2.1.**

*When agents do not care about distinction ($\alpha_{i,d} = 0\ \forall i \in N$) there is at least one clustered equilibrium where agents sort themselves into G stable groups.*

**Proof.** Suppose there are only two goods: $a$ and $b$ with the same cost function. The utility of agent $i$ of owning $a$ (or $b$) decreases monotonically in the distance of his own type $T_i$ from the average value of $T$ of the agents owning $a$ (or $b$). And the price of $a$ (and $b$) increases in the number of agents owning $a$ (or $b$). There exist a value $T^*$ (represented by the indifferent agent, that is $T^* = 0.50$ if the agents are uniformly distributed in term of types ($T_i$) between 0 and 1) such that every agent with $T_i \geq T^*$ chooses good $a$ if every other agent with $T_j \geq T^*$ chooses good $a$ and every agent with $T_i < T^*$ chooses good $b$ if every other agent with $T_j < T^*$ chooses good $b$. Consider an agent $k$ with $T_k > 0.50$ who deviates and buys good $b$. In doing so he increases his distance from the average value of $T$ of his group (that now is the group of agents owning $b$) and increases the price of the good he buys (increasing the number of agents owning it). So the deviating agent $k$ gets a strictly lower utility both in the network (social) value and in the monetary part (exchange value). This argument can be increased to the case with $G \geq 2$. It is an equilibrium if each agent in every partition ( $N/G$ is the number of partitions) buys the same good, and no agent in two different partitions buy the same good.

**Proposition 2.2.**

*If agents do not care about types ($\alpha_{i,t} = 1\ \forall i \in N$) there may not exist an equilibrium.*

**Proof.** Suppose there are only two agents with the same mass of money ($m$) and two goods. Agent 1 has $D_1 = 0.9$ and agent 2 has $D_2 = 0.1$. If the agents own the same good, agent 1 will deviate since the average distinction passes from 0.5 to 0.9 (average distinction given by his own level of $D_1$ alone) and in doing so he gets also a lower price ($P(1) < P(2)$). So owning the same good is not an equilibrium. If the two agents own different goods, for instance agent 1 owns good $a$ and agent 2 owns good $b$. The utility of agent 2 is $(m-P(1))^{\beta}(0.1)^{(1-\beta)}$ keeping good $b$ and $(m-P(2))^{\beta}(0.5)^{(1-\beta)}$if he chooses good $a$. So for any price function that increases sufficiently slowly

$$(m-P(1))^{\beta}(0.1)^{(1-\beta)} < (m-P(2))^{\beta}(0.5)^{(1-\beta)} \tag{2.4.1}$$

or more generally:

$$(m-P(1))^{\beta}(D_2)^{(1-\beta)} < (m-P(2))^{\beta}((D_1+D_2)/2)^{(1-\beta)} \tag{2.4.2}$$

agent 2 is better off choosing the same good as agent 1, but this is not an equilibrium as we know from the first step. Basically the two agents enter a cycle where the high distinctive agent precedes the low one in choosing the good not owned by anyone and the low distinctive follows the former when is called to choose. At this point the high distinctive agent changes the good again since his own level of distinction is less diluted.

The insight we can draw from this brief analysis is that for the system to be unstable (cycles) it is necessary that agents have $\alpha_{i,d} \neq 0$. This is the case because low distinctive agents want to buy goods held by high distinctive agents, but when too many low distinctive agents own a given good, high distinctive agents move to a new good, since is the average level of distinction that matters. There are 3 main effects in this model: the *distinction effect* that induces agents with low distinction to buy the same good as agents with high distinction, the *conformism effect* that induces stability of the system with agents clustered in groups based on agent's types and the *price effect* that homogenizes the groups in terms of number of agents composing them. The fraction of population owning a given good is limited by the the price effect and by the entering in that group of too many low distinctive agents.

The situation plotted in the first figure (below) of the next section can be easily grasped by solving the consumer problem for $\beta = 1$: the marginal utility, $\frac{1}{1+Q_g}$, is decreasing in $Q_g$ so the higher is the quantity of good g the lower is the marginal utility as in standard demand theory.

## 2.5 Calibration

The reason why I rely on simulations is that the analytical results above apply to extreme parameters values, thus describing highly simplified situations. For internal values dynamics are complex and require numerical solutions. Moreover, the fact that there is the possibility that agents find an equilibrium does not tell us whether they actually find it and, if so, how long it takes. In this section I will proceed as follows: The first set of simulations with extreme parameter values is a benchmark for understanding the model's behavior, while the second set of simulation explore the numerical solutions for internal parameter values. On the vertical axis there is the number of agents owning good $g$, on the horizontal one there is time. For extreme parameter values simulations confirm the analytical results above:

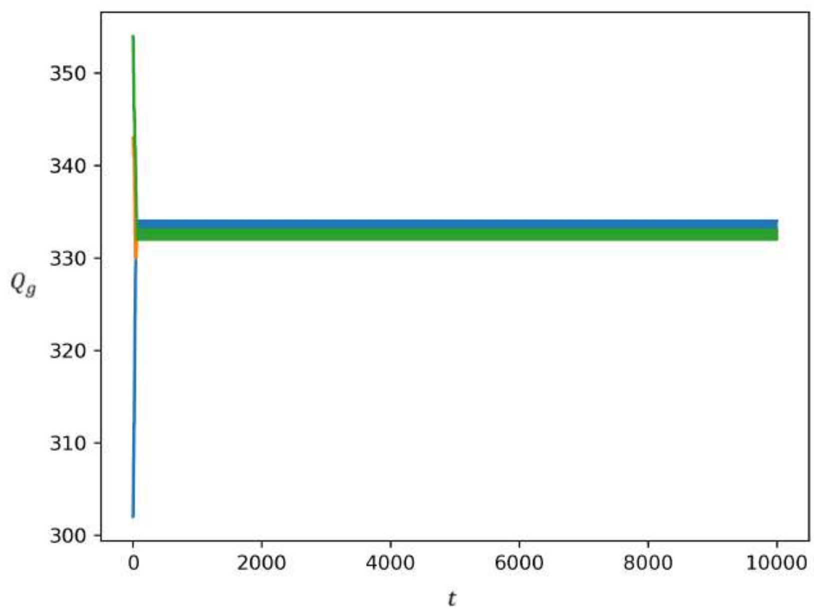



Figure 2.1: with $\beta = 1$ e $N = 999$. The price effect at work here. Agents create three groups of equal size.

If instead agents do not care about distinction

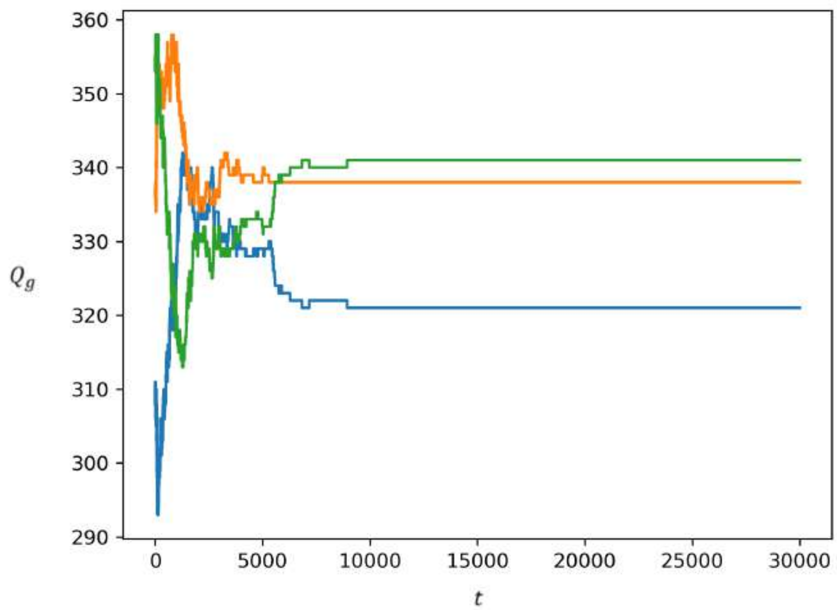



Figure 2.2: with $\alpha_{i,d} = 0$ and $\alpha_{i,t} \in [0, 1]$ agents are clustered. $\beta = 0.1$

While if agents do not care about types cycles arise, as represented in figures 3 and 4 below.

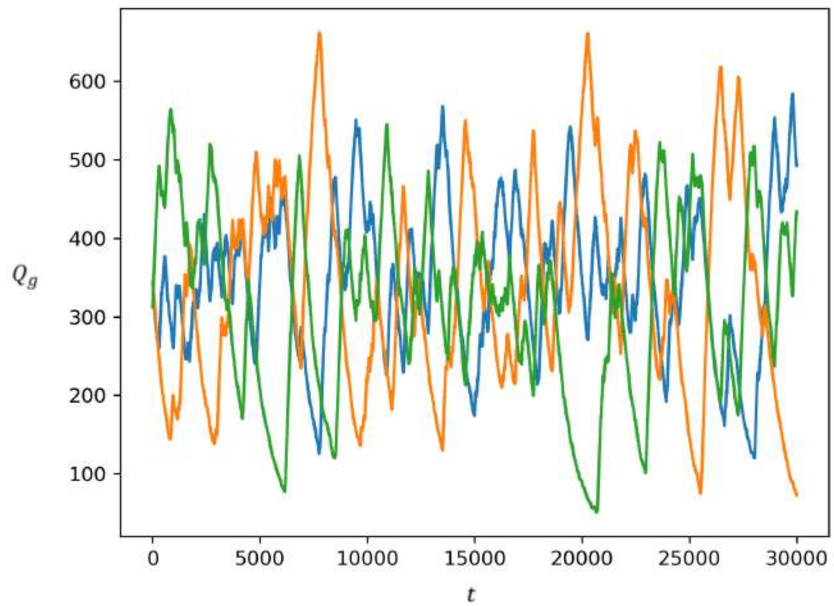



Figure 2.3: $\alpha_{i,t} = 1$ and $\alpha_{i,d} \in [0, 1]$ cycles are clear. $\beta = 0.1$ (types and attraction level are randomly assigned to agents)

As far as agents care about distinction cycles arise.

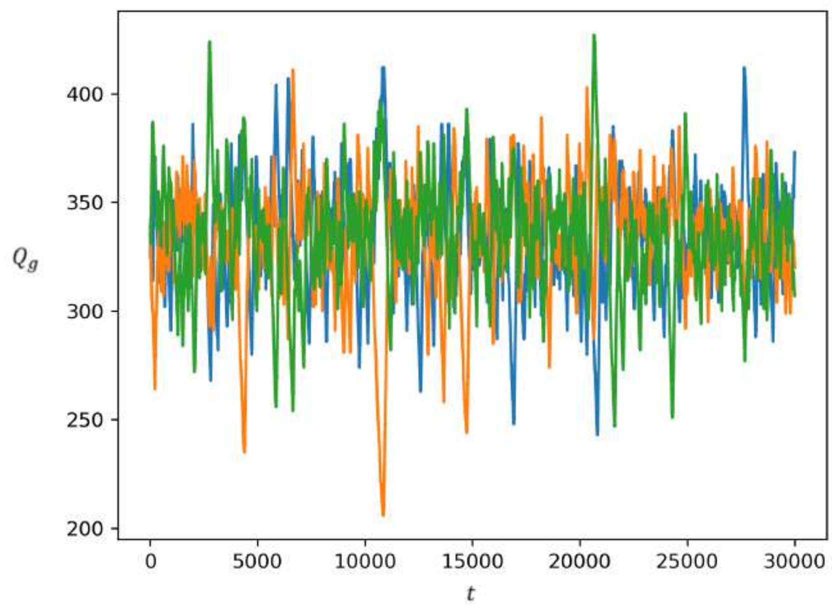



Figure 2.4: $\alpha_{i,t} = 1$ and $\alpha_{i,d} = 1$, $\beta = 0.1$.

In even more forced situation (figure 2.4), where all the agents maximally care about distinction, cycles are more frequent.
The following table resumes the parameter values of this first set of simulations:

Table 2.1: PARAMETER VALUES FOR THE CALIBRATION

| | **Figure 1** | **Figure 2** | **Figure 3** | **Figure 4** |
|---|---|---|---|---|
| Parameter | Price effect | Conformism effect | Distinction effect 1 | Distinction effect 2 |
| $\beta$ | 1 | 0.1 | 0.1 | 0.1 |
| $\alpha_{i,t}$ | $-$ | $\alpha_{i,t} \in [0,1]$ | $\alpha_{i,t} = 1$ | $\alpha_{i,t} = 1$ |
| $T_i$ | $-$ | $T_i \in [0,1]$ | $-$ | $-$ |
| $\alpha_{i,d}$ | $-$ | $\alpha_{i,d} = 0$ | $\alpha_{i,d} \in [0,1]$ | $\alpha_{i,d} = 1$ |
| $D_i$ | $-$ | $-$ | $D_i \in [0,1]$ | $D_i \in [0,1]$ |

The empty entries mean that the parameter value does not matter, since it is multiplied by zero.

In figure 1 agents are 999 to have a number divisible by 3. Agents are clustered in three groups of equal size.
In figure 2 (where agents only care about types) the system needs time in order to reach an equilibrium condition. This is so because we can see this case as a coordination problem that agents are called to face; and actually they need time to solve it. In my model the problem is not very difficult, since agents have just to coordinate into three groups.

A natural question that arises from the equilibrium represented in figure 2 is whether the groups overlap in terms of types that possess a given good, or agents sort themselves into three non-overlapping groups. Running simulations with the same parameter setting as in figure 2 and measuring the types owning each good leads to the following results: the average type buying each good is respectively $\overline{T}_1 = 0.16$ for good 1, $\overline{T}_2 = 0.83$ for good 2 and $\overline{T}_3 = 0.49$ for good 3. The following intervals represent the lowest and the highest types owning each of the three goods (types are just numbers in this model): Types owning good 1 are included in $[0, 0.33]$, in other words $T_1 \in [0.0, 0.33]$. In group 2 instead: $T_2 \in [0.67, 1]$. Group 3 contains types in the range: $T_3 \in [0.34, 0.66]$. Where $T_1, T_2$ and $T_3$ represent respectively types owning good $1, 2$ and 3. The results can be resumed in the following figure:

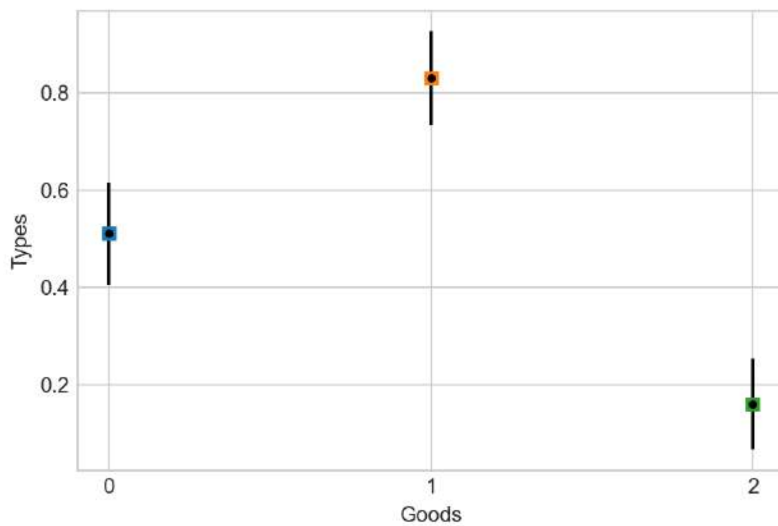



Figure 2.5: Types' analysis in the clustered equilibrium case of figure 2

The little colorful squares represent the average type buying each good, and the black error bar quantifies the standard deviation of the types that form each group. This value express the types' variety contained in each group, and it is similar among the different groups. The types' standard deviations of each group are respectively $SD(types_1) = 0.105$, $SD(types_2) = 0.096$ and $SD(types_3) = 0.93$. Figure 5 clarifies that agents sort themselves into 3 non-overlapping groups of similar size with similar standard deviations among them. Printing the vector of types owning each good, the higher value of the first group's standard deviation is due to the presence of one agent who do not care about types (Table 4 indeed shows that the type's weight is randomly assigned in this simulations) so that even if this agent has a type very far away from those in his/her group, he/she does not care about that, and his/her choice is driven by the price effect (the blue good is the first group and has the lowest price since it is owned by the lowest fraction of the population). The distinction effect here does not matter here ($\alpha_{i,d} = 0$).
These three non overlapping groups can be thus interpreted as three different "styles".
Simulations in figure 3 and 4 instead check which is the role played by the distinction effect in the dynamic. When gents only care about distinction cycles are clear. What I do here is to systematically explore the parameter space in order to check the average SD deviation of cycles for different parameter values.

In particular the relationship I want to explore is that one between the couple of exogenous variables $\alpha_{i,d} \in [0,1]$ and $\alpha_{i,t} \in [0,1]$ and the endogenous one: the average (between the standard deviation of each good) standard deviation of cycles $\sigma(|N|_g)$ (i.e. the cycles' magnitude). In the following graph I plot the results of ten simulations, each of which produces a matrix of standard deviations, whose entries are the average SD of cycles for each possible ordered pair of exogenous parameter values:

$$(\alpha_{i,d}, \alpha_{i,t}) \in [0,1] \times [0,1]$$

. In this set of simulations I added additional constraints: agents are uniformly distributed in terms of types: for instance with 500 agents or $N = 500$, the first 5 are type 0.00 ($T_1 = 0.00$), the second $T_2 = 0.01$ and so on, up to the last five agents with $T_{100} = 0.99$. And are uniform in terms of attraction: the first 50 agents have $D_1 = 0.0$, the second 50 $D_2 = 0.2$, up to $D_5 = 1$. Where $T_1$ and $D_1$ are labels given to segments of the population on types and attraction basis respectively. I added these restrictions in order to partially eliminate the stochastic part, obtaining a cleaner relationship and graph.
In simulations plotted in the next figure the two weights ($\alpha_{i,t}$ and $\alpha_{i,d}$) are uniform across all the agents. In other words in each point of the graph all the agents give the same weight to each behavioral parameter. However, they are still heterogeneous with respect to money, types, and absolute level of distinction ($D_i$).

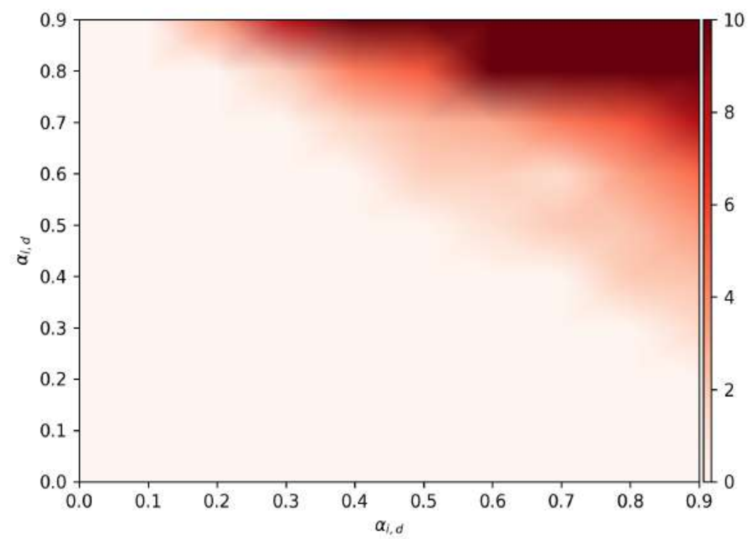



Figure 2.6: Plotting the matrix of standard deviations, the closer to red is the area the higher is the cycles' magnitude

Results are in line with the results stated above that distinguishes my paper from Tassier (2004). You do not need to control for both parameters to observe cycles, it may be sufficient to leave $\alpha_{i,d}$ free and fix $\alpha_{i,t}$ for cycles to arise. More precisely for values of $\alpha_{i,t} \geq 0.9$ cycles arise when $\alpha_{i,d} \geq 0.2$.
Summing up, simulations show that greatest cycles arise for high value of $\alpha_{i,d}$ and value of $\alpha_{i,t}$ close to one, which means low weight to conformism. But we can already observe cycles when $\alpha_{i,d}$ is close to 0.3 and agents care very little about types ($\alpha_{i,t}$ close to $0.8 - 0.9$).
The fact that the shaded area is negatively inclined can be restated: for high values of $\alpha_{i,d}$ there is no need

for $\alpha_{i,t}$ to be very low to observe the cycles. Symmetrically, for low values of $\alpha_{i,d}(0.3-0.4)$, $\alpha_{i,t}$ must be close to 1 for cycles to arise.
From the point of view of conformism instead, it can be said that for the agents to be clusterized, it is sufficient either that they give a high value to conformism and low to distinction (this is obvious), or also that they give low value to both or high to both (the top left corner and the bottom right corner respectively). One might therefore think that the conformism effect prevails over the distinction one. But after these simulations (figure 6) I guess is more correct to say that the clustered equilibrium is more frequent than cycles. Indeed I do not know whether it is the presence of the price effect that makes the system tend to a clustered equilibrium. For instance in the top left corner, where both the behavioral weights are zero, I expect that the price matters even if $\beta = 0.1$.
Therefore the fact that conformism effect prevails over the distinction effect is not the explanation of the dynamic in figure 6. This leads to ask whether it is the price effect that pushes the system towards clustered equilibria more probably than towards cycles. In figure 6 $\beta = 0.1$ (the same as in figure 2,3 and 4). Another reason why the price effect would matter is that even in cases where all the agents have enough money to buy every good (with $N = 1000$, there is no rationing when the number of agents owning a given good is below 403), the money spent enters directly the utility, thus agents prefer to spend less.
In order to answer this doubt I will now explore the case with $\beta = 0$ and all the other parameters exactly equal to the case in figure 6.
I do not insert the figure of this set of simulations (with $\beta = 0$ ) since results are the same as in the case with $\beta = 0.1$. An higher $\beta$ reduces the absolute magnitude of cycles but the relative differences are preserved. So the price effect is not the reason why the white area is wider than the red one. The conclusion we can draw is that in this model there is an higher probability of observing a clustered equilibrium than cyclical dynamic, independently of the price effect. This is true up to a certain point (value of $\beta$) from which the price effect starts to prevail over the others, the limit situation in represented in figure 1.
As stated in the introduction, simulations show a weaker condition with respect to the literature (Tassier (2004)) for having cycles of goods: fixing the type's weight and leaving free the attraction weight may be enough to observe the cycles. In the next section I take this condition for cycles found above and I apply it to the influencer-followers case.

## 2.6 Influencer-followers case

This set of simulation has the aim of describing a situation where an agent has an higher distinction than the others, who have all the same value of $D$ (idea of the influencer and his followers). The population size is $N = 1000$.

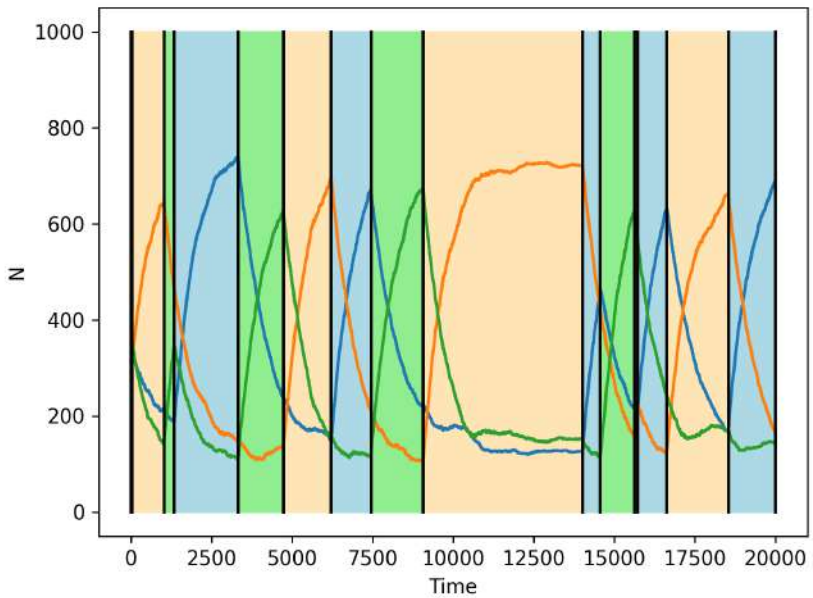



Figure 2.7: $\beta = 0.1$, influencer-followers case, the influencer has $D_i = 0.99$ and the followers $D_j = 0.01$. $\alpha_{i,t} = 0.99$. $\alpha_{i,d} \in [0, 1]$. The influencer also gives minimal attention to the others types and distinction ($\alpha_{influencer,t} = 0.99$ $\alpha_{influencer,d} = 0.01$). Black vertical bars represent the moment when the influencer receives the opportunity to buy a good.

The reasons why the influencer is leaving a group (a good) are two: firstly, when too many agents with low distinction enter his group the utility that comes from his own distinction is more "diluted" by the presence of many agents with low distinction, so that the influencer may find convenient to change good in order to better exploit his own distinction and obtain an higher utility. The second reason is that when too many agents entered the influencer's group (and when he/she is called to choose again) he will choose a cheaper good and not the same as before. It should also be added that the rise of the fraction of the population owning a given good tends to stabilize if the influencer is not selected for the choice, as in the period 10000-14500 of figure 7. The reason is that from a certain threshold onwards (for $N = 1000$, about 700 agents) the price of the good becomes too high and many agents cannot buy the good owned by the majority. Another reason linked to the first one is that the marginal utility coming from owning the same good as the influencer (in terms of additional distinction) decreases with the number of agents owning it.

### 2.6.1 Robustness

In this section I measure the magnitude of cycles for different values of the difference in distinction among agents, up to the point where agents are all equal in this respect.
Looking at cycles of fluctuations around a mean, I take the standard deviation as a measure of their magnitude as in the previous section. After that I will check whether these measures of SD are the same even when prices are fixed at the price where each good is owned by one-third of the population. The next set of simulation highlights the model's behavior for different distinction gap between influencer and followers. Simulations have been repeated 10 times for each parameter setting as in the previous cases.

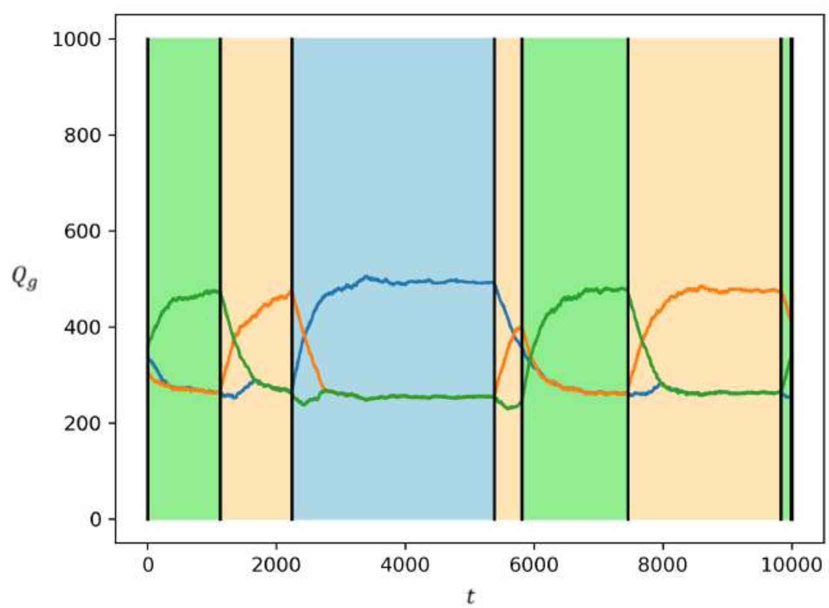



Figure 2.8: $\beta = 0.1$, influencer-followers case, the influencer has $D_i = 0.8$ and the followers $D_j = 0.2$. $\alpha_{i,t} = 0.99$. $\alpha_{i,d} \in [0, 1]$. Reducing the difference between influencer and followers also decreases the standard deviation of cycles.

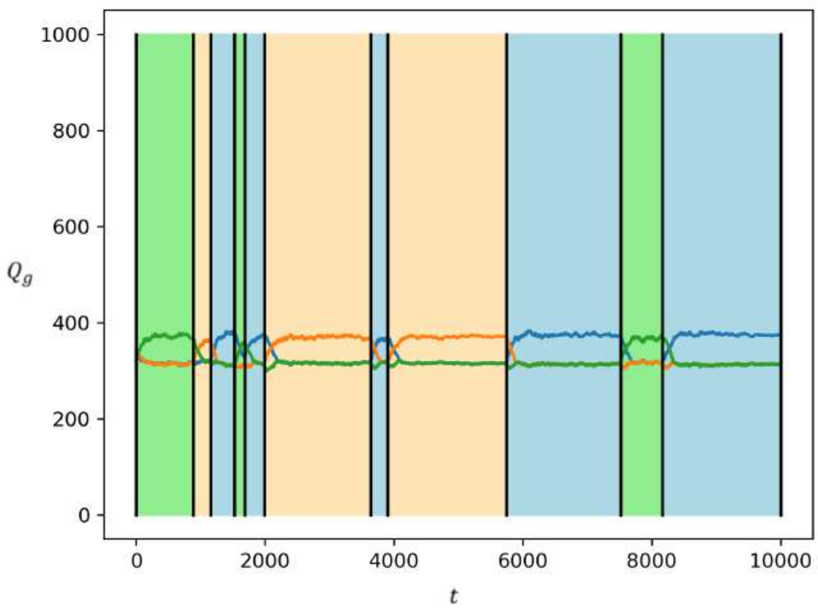



Figure 2.9: $\beta = 0.1$, caso influencer-followers, in the left figure the influencer has $D_i = 0.6$ and the followers $D_j = 0.4$. $\alpha_{i,t} = 0.99$. $\alpha_{i,d} \in [0, 1]$. In the right one the influencer has $D_i = 0.51$ and the followers $D_j = 0.49$. $\alpha_{i,t} = 0.99$. $\alpha_{i,d} \in [0, 1]$. With a minimum difference (0.02) the cycles are still there even if they involves few agents.

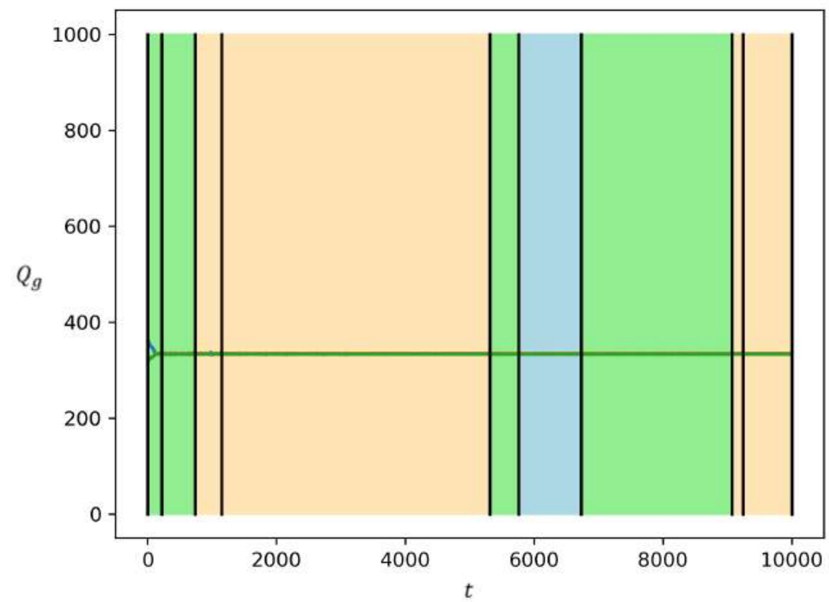



Figure 2.10: $\beta = 0.1$, influencer-followers case, the influencer has $D_i = 0.5$ and the followers $D_j = 0.5$. $\alpha_{i,t} = 0.99$. $\alpha_{i,d} \in [0, 1]$. Cycles disappeared.

Given that cycles disappeared as soon as the difference in distinction disappears, price does not seem to play a particular role (apart from contributing to the stabilization of the single cycle), at least for this very low value of $\beta = 0.1$. But the magnitude of cycles decreases also when $\beta$ increases, since agents are more price sensitive, they abandon the "cool" good earlier. This holds also in my model as it is clear from table relating the value of $\beta$ to the cycle's SD.

Table 2.2: RELATION BETWEEN AND SD OF CYCLES

| $\beta$ | 0.1 | 0.4 | 0.6 | 0.8 |
|---|---|---|---|---|
| $averageSD$ | 115.632 | 91.306 | 61.753 | 48.753 |

We already checked in the previous section the effect of $\beta = 1$, so there is no need to include this parameter setting into simulations. The other parameters are settled in the same way as in figure 7. In my model I added that also the difference in the absolute level of distinction between agents plays a role in decreasing the cycles' magnitude.
The following table shows cycles' sensitivity to changes in the attraction difference (between the influencer and the followers).

Table 2.3: RELATION BETWEEN DIFFERENCE IN DISTINCTION AND SD OF CYCLES

| $\lvert D_{influencer} - D_{followers}\rvert$ | 0.98 | 0.6 | 0.4 | 0.2 | 0.02 | 0 |
|---|---|---|---|---|---|---|
| $averageSD$ | 115.632 | 91.306 | 61.753 | 48.753 | 3.388 | 0.716 |

All the results of this robustness section are obtained by cutting the first 5000 periods in order to allow the system to reach an eventual equilibrium condition. The standard deviations of each good are obtained from the average SD of 30 runs of the simulations for each parameter setting, in order to ensure the results robustness. The two tables show that as soon as agents are more price sensitive cycles disappeared, and as soon as the heterogeneity in distinction goes to zero the price effect prevails also over the conformism one ($\alpha_{i,t} = 0.99$ in this simulations).
Finally notice that an agent may buy the same good the influencer has more than once. For instance, for a time span of 20000 periods and the same conditions as in figure 8, each agent has bought the same good as the influencer 6,939 times on average.

## 2.7 Conclusions

This model aims at providing an explanation to some empirical observations about the practice of consumption, analyzed in the literature exposed in the introduction. The absence of any assumption about secondary needs/goods, wealth's distribution, leisure class and luxury's categories is a way of raising the hypothesis that relegating the mechanisms typical of fashion's world to a wealthy class and to luxury goods is an ideological operation. In particular it is a way to: 1) hide the deeply productivistic definition of survival: the minimum subsistence consumption level can fall quite below the minimum vital if this is required by the creation of profit (just look at the production conditions in some areas of the world Dowling, Moreton, and Wright (2007), Chan (2016), Arnold and Hewison (2005)). On the other hand, the minimum subsistence consumption level can be established well beyond the minimum vital still as function of the creation of profit (our consumerist society). 2) Notions such as extra income and secondary needs justify the manipulation activities of marketing promoters and similar jobs, which with this stratagem become activities that do not affect the basic needs. I argue that these are rationalized notions and this line of demarcation between essential and non-essential needs plays a double ideological role: 1) abstracts, objectifies and preserves a biological sphere of individual values, keystone of the ideological value system we live in, starting from the private property institution. 2) Masks behind the bio-anthropological postulate the deeply productivistic definition of survival that I mentioned above. "Necessary" is also what let the productive system survive and reproduce, this "necessary" can both denies men the basic subsistence goods and push them to sacrifice money in the spiral of consumption/consumerism.
A practical situation that the model could explain is, for instance, the fact that Gucci's "gg" hat is the most sold product of that brand in France. There are various aspects of this fact that the model does not grasp: for instance the differences in the micro-languages of consumption.
With this model I want to show that even among the poors a mechanisms of consumerism that go beyond the strict necessary can come out and this mechanism leads to a logic closer to that one of the *Potlach*[1] than to a rational use of the object.
I therefore do not want to explain the fashion cycles or analyze them, but to raise the hypothesis that the mechanism of good's cycles can concern much more goods/services and social strata than those to which it is usually relegated. It is sufficient for people to use goods as elements of a communication system,

[1]The *Potlach* has been analyzed by many scholars. For instance, for a detailed study see *MALINOWSKI, BRONISLAW. The Primitive Economics of The Trobriand Islandees. The Economic Journal, 1921, 31.121: 1-16.* and *MAUSS, MARCEL. The gift: The form and reason for exchange in archaic societies. Routledge, 2002.* Here I use this word simply as destruction of use value for the purpose of the creation of "social" value, in the various connotations that the word "social" can take depending on the reference culture and other variables.

that is, to give them a connotation (that in this model is just affiliation or detachment from a group) in addition to their denotation (its objective function) to observe distinctive mechanisms similar to those of the fashion's world. So in the end this paper enlarges this dynamic to a wider range of goods and types of agents describing fads that highlight the mechanism of distinction within a (even poor) class or social stratum.

Possible further developments of this model may be: 1) Introduce a different cost function for each good. Periodically introduce new goods in the market and allow agents to own more than one good.

2) Endogenize money in the influencer case: the influencer may receive an amount of money every time a new agent enter his group. In that case the influencer should be able to change good whenever she/he wants, in order to maximize profits. I expect to observe that the influencer will not fall in a situation like that one in figure 7, between period 10000 and period 145000, where his/her profit stop rising: he/she would change good earlier. This is the reason why if I endogenize influencer money I need also to allow him/her to choose the good whenever she/he wants.

3) Think of a possible policy implication: one possibility is to consider pareto efficient the situation where everyone only care about price.

A possible criticism of the model is that in the literature fashions and fads arise when there is a balancing between conformist and non-conformist agents. Here instead I have the greater magnitude of cycles when agents do not care about types. This idea of balancing has been lost in the formalization of the model, In particular, the formalization of the sociological concept of "distinction" has simplified the mechanism of social distinction and this is due to a fallacy in my mathematical ability to formalize the concept. However, even in this model we may find, inside the definition of distinction itself, this idea of balancing: the higher cycles magnitude is observed when agents maximally care about distinction, but the parameter involved is just a weight ($\alpha_{i,d}$), agents are still heterogeneous with respect to the absolute level of distinction ($D_i$). In particular these values are randomly assigned. So those agents with a distinction below the average actually act as conformist, since they are buying the same good as high distinctive agents; and those with high distinction are instead acting as trendsetters. Basically the cycles arise from a balancing between the two groups (let's say those with low $D_i$ and those with an high $D_i$ that can be considered respectively as conformists and non-conformists) in this model too. In other words: it is possible to interpret the model in a way that is coherent with the idea of cycles arisen from a balancing between conformists and non-conformists.

Finally let me clarify that this paper does not aim at providing any kind of deterministic explanation to good's cycles. I am not raising the hypothesis that fashion cycles are determined by conformism and distinction, but I wanted to show that it is sufficient to add two rather generic and banal behavioural elements in a model of consumption in order to obtain complex dynamics with no equilibria.

# Chapter 3

# Exploring the language of consumption

**Abstract**

Text mining is applied to 112 scientific articles about consumption. I use Sketch Engine to explore the functional distributions and the collocational behaviour of the target lemmas in two different corpora: one built using articles retrieved from the American Economic Review and Econometrica; and another one with articles selected from the Journal of Economic Issues. The latter is labelled as "heterodox" journal in the literature, the former as "orthodox" Lee et al. (2010). This paper explores whether this categorization is reflected in the language they use, carrying out both a qualitative and quantitative analysis. The aim is to highlight the structured and systematic nature of the differences in the way 2 different corpora deal with the economic issue of consumption. The synchronic analysis leads to the following empirical results: 1) The JEI exhibits a richer vocabulary and a greater variety of collocations of the target lemmas, while AER/Econometrica makes use of more technicalities. 2) The orthodox corpus rather refers to the intertemporal aspect of preferences, to the absolute (individual) aspects of consumption, to representative agent in a maximization framework and to the sphere of rational choice. But the collocations reveal also the attention paid to preferences heterogeneity and to habitual behavior. The heterodox one instead discusses the relative (social) aspect of consumption, the interdependence and interpersonal aspects of preferences, the concern for status, identity and social meaning given to goods/services. 3) The JEI has a greater propensity towards the purely theoretical discussion than AER/Econometrica, which instead do not discuss approaches and theories, not even those they actually adopt. 4) The heterodox corpus resorts to a terminology and to references which are proper to many other scientific fields (mainly sociology, psychology and anthropology), whilst the AER/Econometrica draws strictly from the economic one. 5) There are linguistic discrepancies between the two corpora which can be traced back to different theoretical approaches characterizing the journals themselves: the neoclassical theory for AER/Econometrica and the institutionalist approach for JEI, with some influences of behavioral economics (in particular about bounded rationality and cognitive dissonance). The main goal of the paper is to bring an empirical proof of the theoretical differences between two economic strands, having distinct fiscal and environmental policy implications.

***Keywords***— *text mining, absolute and relative consumption, keywords analysis, words collocation.*

## 3.1 Introduction

The distinction between mainstream and heterodox economics typically refers to the theory of production, but it also concerns the way of dealing with the issue of consumption and in this field still poses open questions Drakopoulos (2021a). Economic theories can be divided between authors who emphasized the absolute aspect of consumption and others who emphasized the relative one, as discussed in the book Drakopoulos (2021b). The former focused on the optimization of consumption plans and on the intertemporal aspects of preferences, the latter on the interdependent aspects of preferences and therefore on the link between economics, psychology and sociology. In the first case, the nature of consumption is attributed mainly to the biological needs of man, or at least, in our postindustrial societies, to naturalized needs; in the second case to social processes. The different group of theories on consumption highlight respectively the rational character of human choices and the social one, but the two points of view are not mutually exclusive: there are articles (a famous one is Leibenstein (1950)) and theories where the *homo oeconomicus* (maximising agents) have an utility function that depends both on an objectivly measurable quantity of money, on price and on a status component (conformism, social distinction, social environment/network externalities, positional goods and so on). The literature still discusses whether people care more about the relative aspect of consumption (and income) or about the absolute one: *"On one extreme, standard economic theory typically assumes, based on no empirical evidence, that only absolute income and consumption matter. On the other extreme, (Easterlin (1974), Easterlin (1995)) Oswald (1998) and others conclude that only relative income seems to matter"* Alpizar, Carlsson, and Johansson-Stenman (2005). The mainstream theory has always been very much in line with the methodology considered proper of economics; or rather, it is a theory that does not force economics to ask methodological or epistemiological questions. One of the most criticized claims of the neoclassical and new-keyenesian approach is not to have sociological or psychological foundations. As a matter of fact there are at least the risk's perception and the discount rate, in addition the maximizing behavior. So the *homo oeconomicus* is the result of precise sociological and psychological assumptions, (M. Granovetter (1985), Lewin (1996), Bowles, Gintis, et al. (2000), Rabin (2002), Sen (2005), Davis (2010)). Maybe, in some cases, these assumptions are confirmed in concrete situations.
In general, sociological, psychological and linguistic determinations (the representation/meanings given to consumer objects, the most typical of which is the prestige, the status) were seen as subjective (Friedman (1957a), R. Mason (2000b)), little generalizable and therefore little scientific; hence the need for economic theory to break away from this interdisciplinary approach that affected the status of "science" dear to economics. In other words: if to embrace sociology and psychology, for instance, you have to write an argument in words and abandon equations and theorems, then it is not appropriate to introduce them into the debate, it is more important to keep the impression of scientificity.
Given this resistance of a certain economic stream to open up to the social aspect of consumption, I find interesting to analyze if there is a difference (and if it is the case of which type) in approaching this issue between an "heterodox" labelled journal (Journal of economic issues) and two "orthodox" labeled (Econometrica and the American economic review). The division between heterodox and orthodox journals is found in literature (Lee et al. (2010)). This article aims to define ex-post if one approach is different from the other one and if the labels assigned to these three journals are actually founded, at least about the approach to consumption from a lexical and semantic point of view. The research question is therefore the following: is there a linguistic difference (reflecting the underlying theories) in the analysis of consumption, between orthodox and heterodox labelled journals? And if so, of what kind? The results are anticipated in the abstract.

## 3.2 Consumption theories

Let's start by reviewing some of the main theories on consumption, trying to identify two groups of authors based on common characteristics.
In Keyenes we find the absolute income hypothesis, according to which consumption depends on the absolute

level of current income and the marginal propensity to consume (Keynes (2018)). Despite the appearance of the word "absolute" in his hypothesis, Keynes was convinced of the relative (social) nature of consumption and indeed he links the marginal propensity to consume to the psychological characteristics of the community. He also speaks of a comparison taking place at wage level: workers resist a cut in monetary wages to maintain their relative position in the wage structure and not so much to avoid a cut in their absolute income. In his words: *"The effect of the combination by a group of workers is to protect their relative real wages"* (Keynes (2018)).
Keyenes also had an aversion to considering uncertainty as something calculable, he thought it was not numerically measurable (Minsky (1976), Lawson (1988), Lavoie (1994), Ferrari Filho and Fonseca (2015), D'IPPOLITI and Roncaglia (2015) and Dow (2012)). He spoke out against the Bentham's utilitarian-hedonistic philosophy (e.g. Keynes 1933, 184; 1937, 213-214) which formed the basis of the model of economic rationality (Lewin (1996)), on which the modern consumption theory is based and which had the first exponents in the marginalists Jevons, Fischer and Edgeworth. Keyenes paid little attention to the intertemporal analysis of consumption. According to the British economist, consumption has objective and subjective roots, the marginal propensity to consume is positive and less than one, while the average propensity to consume falls as income rises (*fundamental psychological law*). Keyenes' approach was ultimately deeply marked by psychological and sociological considerations (Drakopoulos (1992), D'Orlando and Sanfilippo (2010)).
As is often the case when one looks for a form of determinism, the difference between the results of the theories lies in the premises they start from. In the case of Fischer's inter-temporal consumption theory (Fisher (1930)), it is clear that if you believe in Say's law, the level of income does not vary in the short-run because it stabilizes at the full employment level. Changes in consumption and savings will then depend on the interest rate (the most important determinant of saving/consumption choices according to Fischer). Keyenes, on the other hand, did not start from Say's law: he considered the possibility that the holder of money would avoid spending it, without investing, thus arriving at different conclusions.
James Duesenberry emphasized the role of the interdependence of preference and of habitual behavior. The latter has been rescued in modern macroeconomic consumption theory, the former instead disappeared. The former is a relative aspect (social aspect of consumption), the latter is an absolute one (individual and self-referential consumption). Duesenberry wrote *"A real understanding of the problem of consumer behaviour must begin with a full recognition of the social character of consumption patterns"*(Duesenberry (1949)). The American author was also critical to the independent preferences assumption of the standard consumer demand theory.
Despite the clear institutionalist influences (in particular veblenian ones) R. Mason (2000a), Trezzini (2016) he maintained some of the marginal instruments, particularly in the discussion on the constancy of long-run average propensity to save. Trezzini (2011), Trezzini (2012) argues that this compromise between institutionalism and marginalism has contributed to the instability of the *realtive income hypothesis*. Duesemberry theorized the consumption behavior of an household according not only to the absolute level of current income, but also to the income relative to that part of the population he identifies with (*demonstration effect*). The other effect that together with the previous one forms the *relative income hypothesis* is the *ratchet effect*: if the household's income is reduced, the level of consumption achieved earlier will be possibly maintained. This have fiscal implications because under the relative income hypothesis (demonstration + ratchet effect) a progressive redistributive taxation is fully consistent with Pareto optimality criteria ( Kapteyn and Van Herwaarden (1980), Postlewaite (1998), Corneo and Grüner (2002); for a review see also Truyts (2010)).

Another important author who emphasized the relative aspect of preferences is definitely Richard Easterlin. His hedonic-satisfaction-positional treadmill concepts are of particular relevance to our classification. Indeed, they emphasize the relativity of income, consumption, welfare (or utility) and their interrelationships in different ways. Easterlin (1974), Easterlin (1995), Easterlin et al. (2010).
Easterlin also stressed the fact that, if society's goal is to increase the feeling of well-being, full employment and social safety are more important than growth.

As earlier said, Fisher (1930) dealt with the intertemporal choices between present and future consumption, providing the theoretical basis for the next trend of studies on the topic.
Two main hypotheses were developed in the following years to explain Kuznets's (and not only) empirical findings (Kuznets (1946))[1]: the life-cycle hypothesis of Modigliani and Brumberg (1954) and the permanent income hypothesis of Friedman (1957b). Both give less importance to current income compared to the theories of Keyenes and Duesemberry. The main idea behind the life-cycle hypothesis is that agents maximize their utility over their life-cycle. A temporary change in income is distributed throughout life and therefore will be insignificant, while a permanent change will have a greater impact on current consumption, entering the life-cycle planning.
The keypoint of the Milton Friedman's Permanent income hypothesis is that consumption plans do not depend on transitory income components, which is a tautology, since the transitional component is considered unpredictable (and with expected value of 0, since "good" years would compensate for "bad" years) and an unpredictable thing cannot be part of a planning by definition. In his model the agents have adaptive expectations: they need more than one period increase in income in order to expect an increase in permanent income.

In 1972 with Lucas and in 1979 with Barro theories on random walk consumption appeared, together with the Euler equation of R. E. Hall (1978) (but probably used in economics for the first time by Ramsey in 1928). R. Hall extended the Permanent Income hypothesis: if the expectations on income are perfectly rational (and not adaptive as in the Friedman's formulation) then consumption does not depend on a weighted average of past income, but follows a Martingale (or a random walk). This because, still by definition (still tautologically), an expected change in income is already calculated in the expected permanent income. Therefore all the information is reflected on current consumption and future consumption varies unpredictably: Martingale (or random walk if consumption's variance is constant). In other words, under rational expectations the actual consumption at t+1 is different from the planned one because the consumer at t+1 has new information that is, by definition, independent of the information at time t.

The intertemporal utility maximization framework is thus kept. Hall's idea is at the heart of DSGE models and of modern macroeconomic theory on consumption since it links the present with the future and allows for recursive solutions. If the planned consumption is the same as today, then the budget constraint can be used to write current consumption in terms of wealth and present value of current and future expected income. This is the basis of the so called rational expectations permanent income consumption function (REPIH).
There are Authors as Frank (1985) and Oswald (1997) who maintained an intermediate position between the two visions about the determinants of consumer choices, arguing that utility depends on both absolute and relative income and that the absolute component counts less in the richest countries like the United States.
These theories have different consequences in terms of fiscal policy. The reduced role of income in mainstream theory had consequences according to Drakopoulos (2021a): *"As a result, and contrary to Keynes and Duesenberry who regarded fiscal policy as a key political tool, the modern theories of consumption that form the core of the new classical macroeconomy, provided a theoretical justification for the limited role of fiscal policy in smoothing out large fluctuations in production and employment (see also Bunting 1989; Palley 2010)"*.

Finally, we come to the modern theories on consumption (Bagliano and Bertola (2004)) who base the theory on two main assumptions: 1. Identical economic agents maximise an intertemporal utility function,

[1] Kuznests empirically showed that the aveage propensity to consume for the period 1869-1938 was costant in contrast to the implications of the Keyenesian consumption function, where it is a decreasing function of the real disposable income.

defined on consumption levels in each period of the optimisation horizon, subject to resource constraints. 2. Under the conditions of uncertainty, maximisation shall be based on expectations of future-relevant variables (such as income and interest rates) that are rationally inferred by agents who optimally use all the information. Modern macroeconomics incorporated also the notion of habits in the consumption theory Bagliano and Bertola (2004). Habit effect on the utility function means that a high level of consumption in period t decreases utility in period t + 1 (but increases period t + 1 marginal utility). This is a way of translating the idea that once you consume more, you get used to that level of consumption, which no longer gives the same satisfaction as before in the next period. At the same time the utility of consuming an extra unit at $t+1$ is greater if at the time $t$ an increase in consumption with respect to $t-1$ has already taken place, than if it has not. It is indeed an extension of the previous theory that now models a wider range of possible behaviors, however this extension is still referred to an autonomous aspect of consumption and to an isolated individual. Other variables captured by modern macro models (Jappelli and Pistaferri (2017)) are: bounded rationality, myopic agents, precautionary savings, borrowing constraints, inconsistent and hyperbolic discount rate.

This brief excursus on the economic literature on consumption aims to highlight that it is possible to identify two authors categories: one paying more attention to the absolute aspect of consumption and the other stressing the relative one. This distinction leads us to the discussion of whether the biological (or bio-anthropological) aspect of consumption or the social one (consumption as a social process) is more relevant, economically speaking. In other words: do agents choose according to a principle of universal economic rationality or give a culturally mediated meaning (including an economic one, savings and so on) to their consumption acts? (Todorova (2014)). The paper is organized as follows: section 2 presents the related literature, the tools and the method, both for data collection and analysis; section 3 illustrates the synchronic analysis, proceeding by results, section 4 concludes with an history of economic thought perspective and a policy implication.

## 3.3 Related literature and methods

There are several ways of applying text mining to corpora, for a brief summary see for instance Gupta, Lehal, et al. (2009). The approach I use here is mainly linguistic, the analysis is both qualitative and quantitative. I exploit the scoring functions of SE in order to extract various information such as keywords, collocations, frequencies, co-occurencies and KWIC concordances. The scoring functions assign scores not related to a sentiment measurement (as in sentiment analysis), but to numbers describing some features of the lemma or N-gram involved (how typical of a given (sub)corpus a lemma is, how strong is a given collocation and so on).

This article is not intended to develop a predictive model, or to use a predictive model to explore this academic literature. I just built the corpora following the representativeness criterion, break down the text, prepare it for the software (also adding metadata), analyze it statistically through the scoring functions, the semantic domains and basic statistics for computing lexical richness. In this way I am able to directly compare the languages between journals that ex-ante have different theoretical approaches. Exploring the language is a way of understanding peculiarities and inferring from them which are the theoretical differences between these three journals and how they are shaped. In order to directly explore the semantic differences, besides using the standard collocational analysis, I compare the use of the same lemma in two different subcorpora via their collocates with the Word sketch difference function.

The literature about consumption has known several moments where it discussed the methodology and its subject of study R. S. Mason (2000), Frey and Stutzer (2002). Some economists studied the perception of the relative and/or absolute aspects consumption and preferences through empirical estimates (Bricker, Krimmel, and Ramcharan (2021), Luttmer (2005)), some others through experiments (Alpizar, Carlsson, and Johansson-Stenman (2005)). An attempt similar to that one of this paper was made by Baumgartner (2010), although his corpus consists of papers on marketing studies. There are not many attempts to analyze the text of academic literature on consumption (or a comparative synchronic analysis on a specific

issue): it is a field that, as far as I know, has not been much explored.
The core system functions consist of the following tools, I will deepen only some of them. (Kilgarriff et al. (2014)):

- Concordance searches a corpus for a word form, a lemma, a phrase, a part of speech tag, etc. The system converts all queries into Corpus Query Language (CQL) which can be used directly.
- Word List generates frequency lists of words, lemmas, n-grams or key words.
- Keywords and Terms enables extraction of core lexis in a corpus using "keyness score".
- Collocations calculates words that are statistically associated with the query term. The system uses several measures to find collocation candidates: T-score, MI, log likelihood, logDice, etc.
- Word Sketch generates summaries of a word's grammatical and collocational behaviour using "sketch grammar".
- Word Sketch Difference offers a comparison of two words based on collocations.
- Thesaurus creates a distributional thesaurus based on common collocation. The resulting list of words includes items in various semantic relationships.
- Trends helps to conduct a diachronic analysis of word usage.
- WebBootCaT is a set of programs to compile a user web corpus.

The articles of Econometrica and AER range from 1970 to 2020 while those of the Journal of economic issues from 1973 to 2021.
The reason why I chose Econometric and AER is that they are journals with a high "h" index and a high number of weighed average citations on the articles of the last three years. They are also slightly different journals for the type of contributions published: Econometrica got a reputation more with methodological papers. Neither they are journals focused on the issue of consumption, indeed they range between many topics (empirical, experimental, theoretical and purely methodological papers) and approaches considered different among them (from behavioral to evolutionary/institutional economics, up to the standard General Equilibrium framework, evolved into the NKDSGE models).
The journal of economic issues has been chosen because it is one of the best classified heterodox journals Lee et al. (2010), and not specifically focused on consumption (I avoided journals that focused only on the subject of consumption, as I said above). It is also quite rich of institutionalist papers, one of the economic approaches that deeply studied the issue of consumption.
The two main problems in building a corpus are representativeness and balance. The second does not concern us since I do not deal with diachronic analysis. About the first: I took almost all (55 out of 65) JEI articles that had consumption or consumer in the title. In a second moment I looked for articles that had consumption or consumer among keywords and I added them to the corpus. In total, the corpus of JEI consists of 61 (out of a total of 85) articles and 498,481 tokens. A token is an individual occurrence of a linguistic unit in speech or writing . AER/Econometrica instead has 41 articles and 635,410 tokens.
Another reason why I chose AER and Econometrica is that by taking the two journals together, the results obtained through the search engines for articles with consumption or consumer in the title formed a representative corpus of similar dimension to that one of JEI. If I had chosen the Journal of political Economy or the Journal of economic Literature for instance, I would have to create a corpus much larger than that one of JEI in order to achieve corpus representativeness, thus creating imbalance between the two compared corpora.
Only words enter this analysis, so equations, numbers, symbols and similar tokens are not taken into account. Grammatical words are automatically excluded from the keywords analysis and they appear only in the wordlist function, which summarizes the relative and absolute frequencies.
Most of articles are relatively recent (after 2010), so my corpus is not balanced (representative with respect to time) since I was interested in studying the current state of language in this literature.
I believe that the sample used here is sufficient to give an idea of the language peculiarities of consumption

economic theories.
We come to the analysis of the tools used. In order to understand the typical characteristics of a corpus, keywords and multi-keywords extraction are fundamental tools. They are represented by words (or words' strings) that appear more frequently in the focus corpus than in a prepackaged reference corpus chosen by the researcher. This of course can be a problem if you analyze old texts, where the word's form can be different from nowadays. In Sketch Engine there is, however, the possibility of performing your own lemmatizing and POS manually (https://www.sketchengine.eu/documentation/preparing-corpus-text/), this function is useful if you have to manage words that are written in forms not recognized by any reference corpus. Otherwise the risk is to have some false keywords: words that seem typical of the focus corpus, only because the reference corpus does not recognize the forms these words are written in the focus corpus. In my research this problem does not arise because the texts I analyze are relatively recent and word forms common in current english. Apart from the case where there are words separated by an hyphen because they are widely used in economics while in current english they are written separately (for instance: life-cycle).
These reference corpora work thanks to their linguistic representativeness. A corpus with a miscellaneous language and whose variety is uniformly distributed (or distributed according to the frequency of use in the current written language) within the corpus can act as a reference corpus.
I briefly summarize the steps of the analysis in chronological order, looking for a method as systematic as possible. The first thing to do is to clean up the texts (from noise) and prepare them to the software analysis. Once the files (papers) have been inserted into Sketch Engine, I added some metadata about the journals they belong to and the labels "orthodox" or "heterodox". The software then automatically performs tokenization, lemmatization and stemming. You can then integrate this automated process with some manual additions, namely: inserting your own part of speech tags and lemmas. Part of Speech (POS) tagging allows labeling one single token with specific informations such as gender, number and tense. In Sketch Engine there are methods to annotate structures (and not individual tokens). Annotating structures means adding labels to pieces of text longer than one token (they can go from two tokens up to the entire corpus) and providing information such as the publication date, the author or the professional category to which the speaker belongs (politicians, bankers, etc.).
The wordlist function returns the absolute and relative frequencies of words and lemmas, grammatical words included, so it is not very interesting. The Keywords function is instead important since it identifies the main features of the focus corpus with respect to a reference corpus representative of the language and provides the basis (the lemmas) for the collocational analysis. The latter may have as objects also the target lemmas related to the research question of the author. Tokens (or N-grams) are labelled with a keyness score according to the *"simple math"* method Kilgarriff (2009), which tell us "word W is so-and-so times more frequent in corpus X than corpus Y" and is given by the formula in the appendix.
Keywords can also be used to analyze a subcorpus, for instance referred to a particular time period, to show that there are peculiarities of that period (or of that particular journal in my case) or stuffs like this. The top keywords reflect the semantic domain of the focus corpus very well and can be used to explore differences between corpora in Sketch Engine as shown in Kilgarriff (2012).
A natural way of proceeding given my research question is to look at the keywords (both single and N-grams), understand how they characterizes the focus corpus and then move to study the collocations of such keywords with the functions Word Sketch and Word Sketch difference, which a form of word sense disambiguation and semantic analysis. In addition to keywords, it is important to study also words that characterize the field of studies the corpus refers to, in my case consumption. So words such as *preference, good, behavior, agent, consumer, choice* and some others will be chosen even if they do not appear among keywords, since the different ways of using these words may imply different theoretical visions. Furthermore a lemma typical of a given literature may not enter the keywords list of a corpus from that literature if it is commonly used in language. For instance *good* is a quite common language in english, so I do not expect to find it in the keywords list, since it would be very frequent also in the reference corpus (the English web 2020). But it is a lemma deserving an analysis since it may provide insightful information for

the theoretical vision of consumption of that corpus. The choice of these words, which are added to the keywords as objects of collocational analysis, is left to knowledge of the topic by the researcher.
I tried to see which results I obtained by changing the reference corpus, which is important since it could seriously affect the keyness score associated with many words, but in my case the results were substantially unchanged, whether I used English web 2020 or Gutenberg English 2020.
Keywords (partially) and wordlist are functions linked to the "bag of words" approach, where only mainly frequencies matter, and their positions (semantics) are ignored. Word Sketch, Concordance and KWIC (keywords in context) provide instead informations on words' collocation and context of use, so they express pure meaning. Here the knowledge of the topic by the researcher plays a central role. More insights about the semantic analysis are in the appendix
The descriptive statistics extracted after the process of tokenization, stemming and pos tagging provide us some interpretable and interesting information about the lexical richness. At various points, I integrate my analysis with comments related to the history of economic thought and to the sociology of consumption, in order to provide possible explanation to the quantitative results and for the pattern of differences uncovered.
I realized that presenting all the results and then drawing conclusions, made the paper heavy to read. Therefore, I will go over the conclusions I anticipated in the abstract, showing step by step the empirical results that led me to draw such conclusions (or interpretations).

## 3.4 Sinchronic analysis

### 3.4.1 Lexical richness and technicalities

The first results come from the descriptive statistics of the corpora and from lemmas' relative frequencies. The corpus AER/Econometrica has 635,410 tokens and 447,462 words. The number of unique words including non-words (occurencies) is 25,199 and the lemmas are 15,611. For JEI this numbers are respectively 498,481, 391,424, 29,913 and 18,751. Some results can be extracted from these numbers: namely the fact that in AER/Econometrica there are more non words than in JEI. This is due to the higher presence of mathematical expressions and of greek letters in that corpus.
The types tokens ratio is the ratio between the unique words (or lemmas) of a text and the total number of tokens, so it is a measure of the lexical variety or richness. The closer it is to 1 the higher is the lexical richness of the corpus. In AER/Econometrica this index is 0,039 and in JEI instead 0,06 if I measure it using the unique words. But since I am dealing with economics academic articles, there is the possibility of finding an high number of unique words coming from math symbols, so a more credible measure is TTK calculated with lemmas. In this case the TTK is 0,024 in AER/Econometrica and 0,037 in JEI. This is a first prove of the higher lexical richness of the heterodox corpus.
Many keywords of the AER/Econometrica are techniques, but this is not surprising since I am applying text mining to academic papers, it is plausible that texts are characterized by a lot of specific terms of economics field such as *lemma, equilibrium, convex, theorem* and *concave*. But also *elasticity, differentiable* and many more. I am here reporting some technical keywords in the orthodox corpus:

| | | Frequency per million? | | Document frequency? | | Relative DOCF? | | ARF? | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Word | Focus | Reference | Focus | Reference | Focus | Reference | Focus | Reference | Score |
| 1 | quantile | 509.91 | 0.19 | 4 | 3,888 | 9.76% | < 0.01% | 30.18 | 3,043.78 | 428.8 |
| 2 | lemma | 569.71 | 0.63 | 20 | 12,102 | 48.78% | 0.01% | 84.13 | 9,180.25 | 349.6 |
| 3 | theorem | 826.24 | 4.39 | 26 | 77,230 | 63.41% | 0.09% | 161.86 | 59,175.53 | 153.5 |
| 4 | multiperiod | 107.02 | < 0.01 | 8 | 254 | 19.51% | < 0.01% | 12.13 | 176.53 | 107.2 |
| 5 | concave | 275.41 | 1.62 | 28 | 42,884 | 68.29% | 0.05% | 59.91 | 31,451.59 | 105.3 |
| 6 | differentiable | 110.17 | 0.18 | 20 | 4,710 | 48.78% | < 0.01% | 27.35 | 3,168.89 | 93.8 |
| 7 | equilibrium | 624.79 | 5.73 | 23 | 135,994 | 56.10% | 0.17% | 113.85 | 104,505.42 | 93.0 |
| 8 | martingale | 111.74 | 0.26 | 6 | 5,822 | 14.63% | < 0.01% | 12.11 | 4,249.75 | 89.8 |
| 9 | covariance | 149.51 | 0.69 | 12 | 13,972 | 29.27% | 0.02% | 23.72 | 10,930.50 | 89.1 |
| 10 | recursive | 180.99 | 1.34 | 16 | 33,257 | 39.02% | 0.04% | 31.73 | 25,074.49 | 77.7 |
| 11 | monotonicity | 78.69 | 0.06 | 10 | 1,696 | 24.39% | < 0.01% | 13.88 | 1,227.25 | 75.0 |
| 12 | idiosyncratic | 151.08 | 1.17 | 10 | 47,391 | 24.39% | 0.06% | 21.57 | 31,011.78 | 70.2 |
| 13 | corollary | 124.33 | 0.98 | 15 | 37,542 | 36.59% | 0.05% | 22.61 | 25,127.09 | 63.2 |
| 14 | maximization | 86.56 | 0.44 | 19 | 14,799 | 46.34% | 0.02% | 25.37 | 10,320.80 | 60.7 |
| 15 | separable | 89.71 | 0.50 | 16 | 15,035 | 39.02% | 0.02% | 22.32 | 10,719.49 | 60.5 |

Figure 3.1: Only technical keywords among the first 100 in AER/Econometrica are reported in this table

The first column refers to the relative frequencies in the focus and in the reference corpus respectively. The second one contains the percentage of documents in the corpus where the word occurs. The Average Reduced Frequency is a modified frequency whose calculation prevents the results from being excessively influenced by a high concentration of a token in only one or more small parts (in my case documents) of the corpus. If the token is evenly distributed in the corpus, ARF and absolute frequency have similar or identical values. The last column's numbers are the keyness scores of each word, calculated with the simple math method described above. I am using the English Web 2020 (enTenTen20) as reference corpus in this section. In AER/Econometrica one of the first keywords is *intertemporal*. It has a keyness score of 350.6 and occurs in 28 different articles. I analyze its collocations in the next section.
In the other corpus (JEI) the keywords are not as technical as in AER/Econometrica, the lexical choices are less specific. More precisely, among the first 100 keywords there is no one referred to the technical aspects of a mathematical model. Other evidence underlying the higher technicalities of AER/Econometrica is the Word sketch difference of the adjective predicates of *preference*:

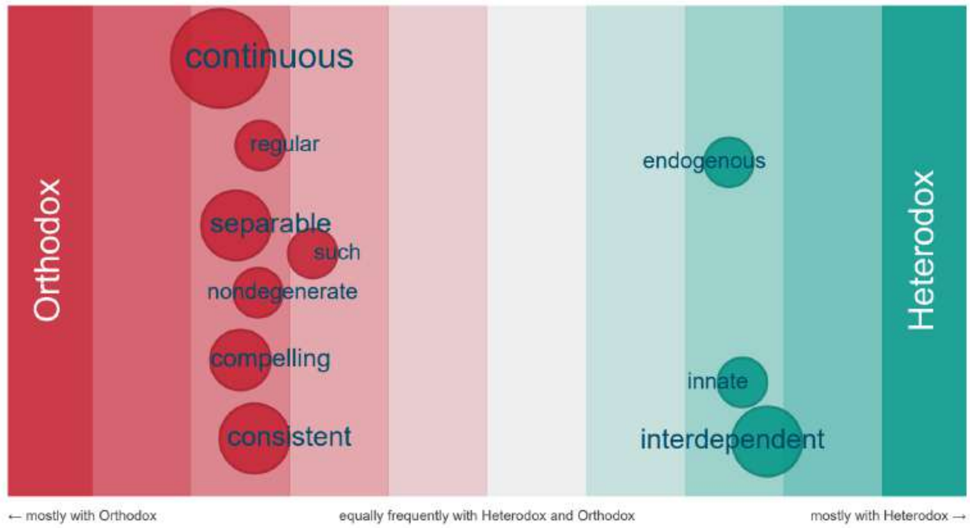



Figure 3.2: Word' sketch difference of the adjective predicates of *preference*

In order to perform the word sketch difference analysis I consider all the articles in a single corpus that I divide in 2 subcorpora according to the previous journals' classification. This allows me to directly check the difference in treating certain words or clusters of words (which can be defined as "themes") with the Word sketch applied to both the corpora simultaneously.

About figure 2: the circle size represents the relative frequency of the collocation, the distance from the center indicates how strong the collocation is in one corpus and in the other. A central position of a couple of the same collocate means that in the two corpora the strength of that particular collocation is the same. The modifiers of preferences in red are related to intertemporal choices, to their consistency and to some technical properties of the preference relationship, while those in green are undoubtedly related to the social nature of preferences with no technicalities.

Looking at the collocations of *preference* and *good*. The relative frequency of the lemma *preference* in AER/Econometrica is 1,019.19, while in JEI is 738.70. *Good* instead has 714.56 and 1859.84. The modifiers and adjectives preference of preference (but also verbs), are rich of evidences denoting discrepancies between the two corpora in the lemma collocations: the corpus AER/ Econometrica uses a language rich in: 1) terms related to the sphere of rationality and calculation. 2) terms semantically related to the autonomous aspects of consumption and to the temporal choices or temporal properties of the preferences themselves (time separable, time consistent and so on). 3) Mathematical properties of preferences themselves such as *homothetic, continuous, recursive.* The JEI instead insists on the endogenous and social character of preferences *interdependent, endogenous, interpersonal*.

The verbs with *behavior* as object are for instance *guide, shape, emulate* and *drive* in JEI; and *optimize, describe* and *model* in AER/Econometrica. The modifiers are *human, exceptional* and *pre-crisis* for JEI and *temporal, choice* and *rational* for the other corpus.

About the rationalistic character of language in the orthodox corpus, I also quickly examine the collocational behavior of *desire*, to see how its use differs in the two corpora. This lemma, contrary to *preference* occurs more in JEI than in AER/Econometrica: 458.27 and 72.41 respectively of relative frequency. This already reflects the less cold, more subjective language of JEI than the other corpus. Looking at "desire of/for.." grammatical relationships and modifiers, comes out the much greater variety of behaviors and specifications in the heterodox corpus. Including the classic concepts of emulation and distinction charac-

terizing the consumption literature. The strongest pattern of *desire* in JEI is with *material*, indeed, looking at the concordance, two documents criticized the consumerist culture.
About *good* instead the strongest modifiers are *nondurable, adjustable, composite* and *physical* in AER/Econometrica while *public, positional* and *status* in JEI.
Finally, and in line with what we stated above, the JEI deal with the concept of conformism (or emulation) and distinction. AER/Econometrica have 0 occurencies of *conformism* and *emulation*; *distinction* appears 11 times but has always the meaning of discerning between alternatives and never that one of social distinction. IN JEI instead they appear 144, 3 and 94 respectively. These observations put together, are empirical evidences that can be interpreted in the sense of point one in the abstract: JEI uses a lexically richer language, while the other corpus contain more lemmas repetitions and uses a more technical language. In any case going ahead in the analysis we will see this underlying theme (point one of the abstract) repeated in various context, together with the higher rationalism of AER/Econometrica (which is a background theme in many cases).
Among the modifiers of good in the orthodox corpus there are all adjectives denoting an objective feature: *nondurable, adjustable, composite, physical, single, market.* While in the other corpus the strongest collocations among the modifiers denote subjective characteristics of goods: *positional, status, luxury, public, private, superior.*
The adjective predicates of *choice* and the modifiers of *behavior* reveal the higher determinism of AER/Econometrica, with JEI that leaves more space to the human aspects of choices. The former are mainly: *flawed, conscious, interdependent, complex* in JEI and *negligible, deterministic, consistent, inconsistent, compact* in AER/Econometrica. *Compact* is referred to the feasible set of consumption choices. I insert the figure of the modifier of *action*, which reveals the semantic domain of subjectivity for JEI and more objectivity for AER:

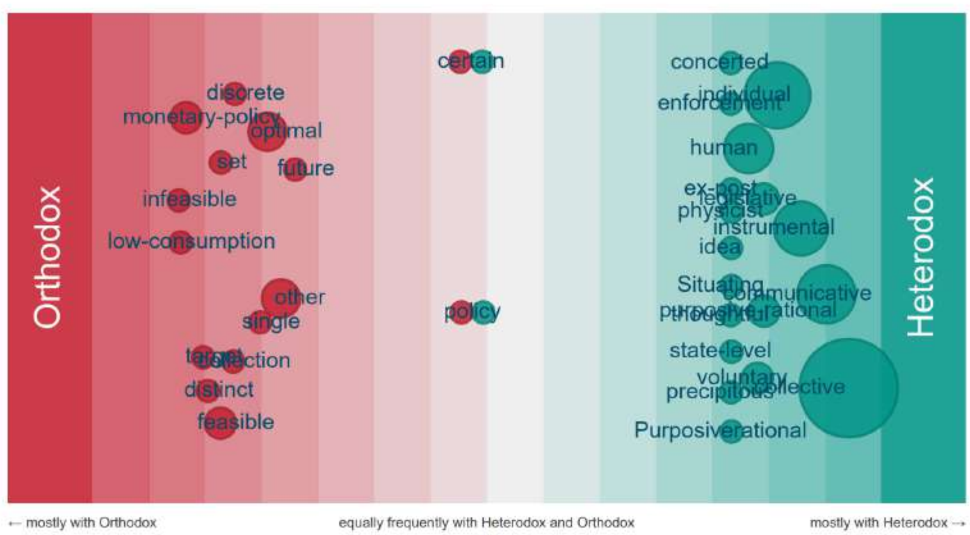



Figure 3.3: Word' sketch difference of the modifiers of *action*

Here too we can see that the language of AER is more objective, technical and cold while JEI uses a language more linked to human behaviour and subjectivity. Other proofs of the rationalism of AER/Econometrica with respect to JEI are the relative frequencies of the lemma *proof*: 657.84 for the former and 6.02 for the latter. The relative densities are respectively 131.08% and 1,2%. A relative density above 100% means that is more frequent in the related subcorpus than in the whole corpus.

### 3.4.2 Individual needs or social process?

Point 2 in the abstract stated that the orthodox corpus rather refers to the intertemporal aspect of preferences, to the absolute nature of consumption, to the representative agent in a maximization framework and to the sphere of rational choice. But keywords and the semantic analysis of target lemmas reveals also the attention paid to preferences heterogeneity and to habitual behavior. The heterodox one instead discusses the relative (social) nature of consumption, the interdependence and interpersonal aspects of preferences, the concern for status, identity and a variety of behaviors related to the social sphere.
The empirical evidences sustaining point 2 require a deeper and longer analysis, therefore I will proceed in stages. First of all I present the evidence that shows that AER/Econometrica places the emphasis on the autonomous aspect of consumption and preferences, while JEI on the social one.
The identification of the semantic domain of the two corpora is performed through the analysis of keywords and multi keywords. Maybe the latter give a more precise idea of the underlying theoretical differences than the former. Among the first fifth fifty keywords of the heterodox corpus we find :

| | | Frequency per million? | | Relative DOCF? | | ARF? | | |
|---|---|---|---|---|---|---|---|---|
| | Word | Focus | Reference | Focus | Reference | Focus | Reference | Score |
| 1 | duesenberry | 405.23 | < 0.01 | 21.31 % | < 0.01 % | 29.57 | 59.13 | 404.9 |
| 2 | conspicuous | 1,113.38 | 2.78 | 62.30 % | 0.12 % | 160.53 | 68,504.88 | 294.9 |
| 3 | institutionalist | 170.52 | 0.04 | 36.07 % | < 0.01 % | 29.47 | 1,003.17 | 164.2 |
| 4 | positional | 361.10 | 1.55 | 16.39 % | 0.05 % | 20.51 | 30,336.34 | 141.7 |
| 5 | intersubjective | 142.43 | 0.14 | 4.92 % | < 0.01 % | 5.93 | 2,785.09 | 125.6 |
| 6 | habitus | 114.35 | 0.18 | 4.92 % | < 0.01 % | 4.76 | 3,346.37 | 98.1 |
| 7 | easterlin | 94.29 | 0.03 | 9.84 % | < 0.01 % | 8.85 | 450.71 | 92.8 |
| 8 | overindebtedness | 76.23 | 0.01 | 1.64 % | < 0.01 % | 1.83 | 179.30 | 76.4 |

Figure 3.4: some keywords of the JEI selected among the first 50

It is clear the attention paid by JEI to relative consumption. Some relevant multikeywords for identifying the semantic domain of the whole corpus are:

(items: **57,614**)

| Word | Score | Word | Score | Word | Score |
|---|---|---|---|---|---|
| conspicuous consumption | 697.7 | view citing articles full term | 79.2 | view related articles citing article | 61.2 |
| use subject | 161.5 | citing articles full term | 79.2 | articles citing article | 61.2 |
| citing article | 154.7 | view citing article | 79.2 | intangible property | 61.0 |
| consumer behavior | 148.0 | channel of social mobility | 79.2 | articles cite | 60.7 |
| habit of thought | 147.2 | view cite | 79.2 | consumer finance | 60.5 |
| conspicuous waste | 144.9 | social process | 78.8 | discount rate | 59.7 |
| positional market | 141.4 | demand theory | 78.3 | preference trait | 59.2 |
| household debt | 140.9 | social provision | 76.5 | theory of consumer behavior | 59.0 |
| chain store | 133.1 | consumption pattern | 76.5 | consumer theory | 58.6 |
| consumer debt | 131.5 | system of conspicuous waste | 75.2 | life process | 58.2 |
| leisure class | 130.4 | consumer preference | 75.0 | cultural transmission | 57.9 |
| social mobility | 127.5 | neoclassical economics | 74.9 | mainstream economics | 57.4 |
| saving rate | 115.7 | household saving | 74.7 | personal saving | 57.0 |
| consumer credit | 115.2 | consumption activity | 74.3 | boycott participation | 55.1 |
| theory of consumption | 112.8 | cultural evolution | 74.0 | institutional change | 55.0 |
| journal of economic issues | 111.3 | institutional discrimination | 73.1 | consumer choice | 54.8 |
| view related article | 111.3 | material market | 72.0 | income hypothesis | 54.7 |
| condition of access | 110.9 | income inequality | 71.7 | installment credit | 54.6 |
| consumption behavior | 101.8 | full term | 71.5 | demonstration effect | 54.1 |
| social cost | 100.3 | income group | 70.7 | interest payment | 53.2 |
| income distribution | 99.5 | income household | 68.8 | downloaded by | 53.2 |
| consumer boycott | 99.4 | economic issue | 68.5 | negative trickle-down | 53.1 |
| economic theory | 98.1 | institutional trust | 66.4 | cultural variant | 53.0 |
| journal article view | 97.3 | survey of consumer | 65.2 | real-estate industry | 52.6 |
| article view | 95.7 | consumption theory | 65.0 | disposable income | 51.4 |
| articles full term | 95.3 | habit of life | 64.9 | conceptual taste | 51.1 |
| relative income | 92.3 | conspicuous consumer | 64.9 | class identity | 50.9 |
| debt collection | 92.2 | inner impulse | 64.5 | middle income | 50.0 |
| preference formation | 88.9 | survey of consumer finances | 64.1 | top income | 49.4 |
| theory of consumer | 84.6 | material desire | 63.0 | law-enforcing institution | 49.1 |
| vertical mobility | 84.5 | marginal utility | 62.8 | significance of consumption | 49.1 |
| theory of conspicuous consumption | 83.1 | consumption expenditure | 62.7 | home price | 48.7 |
| indicator trait | 81.1 | intersubjective demand | 61.2 | | |
| consumer demand | 80.8 | related articles citing article | 61.2 | | |

While in AER/Econometrica keywords that lead to the interpretation about the main points of view on consumption are:

| | | Frequency per million? | | Document frequency? | | Relative DOCF? | | ARF? | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Word | Focus | Reference | Focus | Reference | Focus | Reference | Focus | Reference | Score |
| 1 | intertemporal | 376.14 | 0.08 | 28 | 2,250 | 68.29 % | < 0.01 % | 85.35 | 1,641.25 | 350.6 |
| 2 | life-cycle | 256.53 | 0.91 | 15 | 30,112 | 36.59 % | 0.04 % | 40.40 | 21,049.54 | 135.1 |
| 3 | one-period | 119.61 | < 0.01 | 10 | 282 | 24.39 % | < 0.01 % | 12.65 | 202.10 | 119.6 |
| 4 | multiperiod | 107.02 | < 0.01 | 8 | 254 | 19.51 % | < 0.01 % | 12.13 | 176.53 | 107.2 |
| 5 | euler | 193.58 | 0.84 | 14 | 14,764 | 34.15 % | 0.02 % | 33.59 | 11,413.46 | 105.5 |
| 6 | optimal | 1,262.18 | 13.58 | 36 | 442,057 | 87.80 % | 0.54 % | 301.50 | 308,977.75 | 86.6 |
| 7 | recursive | 180.99 | 1.34 | 16 | 33,257 | 39.02 % | 0.04 % | 31.73 | 25,074.49 | 77.7 |
| 8 | maximization | 86.56 | 0.44 | 19 | 14,799 | 46.34 % | 0.02 % | 25.37 | 10,320.80 | 60.7 |
| 9 | time-additive | 26.75 | < 0.01 | 3 | 6 | 7.32 % | < 0.01 % | 3.29 | 3.65 | 27.7 |

Figure 3.5: some keywords of the AER/Econometrica selected among the first 50

Three main features of the orthodox corpus are conveyed by this table: the presence of technical lemmas such as *recursive, maximization, time-additive*, the intertemporal nature of agents' choice (*intertemporal, one-period, multiperiod, life-cycle*) and the optimality/maximization as model's trigger.
Also multikeywords are quite interesting, I report here a table of the first 100, the supplementary material reports the complete list of multikeywords:

(items: **57,091**)

| Word | Score |
|---|---|
| use subject | 703.6 |
| q w | 601.2 |
| utility function | 486.1 |
| liquid asset | 317.0 |
| period t | 283.2 |
| α q | 281.0 |
| habit formation | 279.1 |
| optimal consumption | 273.1 |
| α q w | 259.1 |
| risk aversion | 206.3 |
| expected utility | 174.5 |
| h s | 169.8 |
| permanent income | 169.2 |
| discount factor | 164.2 |
| consumption response | 156.4 |
| labor income | 156.0 |
| consumption function | 153.5 |
| labor supply | 149.9 |
| x z | 148.6 |
| low liquid asset | 142.6 |
| marginal utility | 135.4 |
| time t | 121.0 |
| σ t | 118.5 |
| liquidity constraint | 114.5 |
| continuous time | 111.1 |
| household consumption | 110.4 |
| rebate coefficient | 106.4 |
| value function | 104.8 |
| marginal propensity | 104.2 |
| decision problem | 102.1 |
| optimal policy | 99.4 |
| proof of theorem | 99.3 |
| rational expectation | 98.4 |
| liquid asset household | 95.4 |

| Word | Score |
|---|---|
| asset household | 95.4 |
| measurement error | 93.2 |
| quantile preference | 92.3 |
| habit model | 92.2 |
| income effect | 91.1 |
| asset group | 91.0 |
| liquid asset group | 90.7 |
| past consumption | 90.3 |
| liquid wealth | 87.1 |
| payment requirement | 84.8 |
| aggregate consumption | 83.2 |
| random variable | 82.6 |
| relative consumption | 82.5 |
| sample path | 81.5 |
| s e | 81.4 |
| illiquid asset | 81.4 |
| idiosyncratic risk | 81.2 |
| total expenditure | 81.2 |
| current consumption | 81.0 |
| down payment | 80.1 |
| consumption growth | 79.7 |
| transaction cost | 79.2 |
| sufficient condition | 78.3 |
| preference for commitment | 78.1 |
| high liquid asset | 78.1 |
| consumption rule | 76.3 |
| equilibrium price | 72.8 |
| income shock | 72.0 |
| consumption effect | 71.5 |
| stimulus payment | 70.6 |
| h s e | 70.2 |
| probability measure | 70.0 |
| objective function | 70.0 |
| first-order condition | 69.8 |

| Word | Score |
|---|---|
| unsecured consumer | 69.6 |
| collective rationalization | 68.6 |
| z t | 68.5 |
| income hypothesis | 68.1 |
| precautionary saving | 67.6 |
| housing equity | 67.6 |
| relative consumption effect | 67.1 |
| impulse response | 67.0 |
| permanent income hypothesis | 66.7 |
| type of income | 66.4 |
| excess sensitivity | 65.4 |
| standard error | 64.5 |
| parameter estimate | 64.0 |
| illiquid wealth | 63.9 |
| consumption commitment | 63.9 |
| consumption plan | 63.6 |
| time preference | 63.1 |
| commitments model | 62.4 |
| unsecured consumer credit | 62.3 |
| consumption smooth | 61.7 |
| infinite horizon | 61.1 |
| fiscal stimulus payment | 60.8 |
| net worth | 60.1 |
| qn wn | 59.2 |
| low liquid asset household | 59.2 |
| consumption expenditure | 59.0 |
| date t | 58.9 |
| αm qm | 57.7 |
| asset holding | 57.5 |
| consumption model | 56.8 |
| fiscal stimulus | 56.4 |
| credit record | 56.3 |

Multikeyword tables sketch the main semantic fields of both the corpora.

An important tool to understand the semantic domain of a corpus are the keywords collocations. Let's look at the collocational behavior of the lemma *intertemporal*:

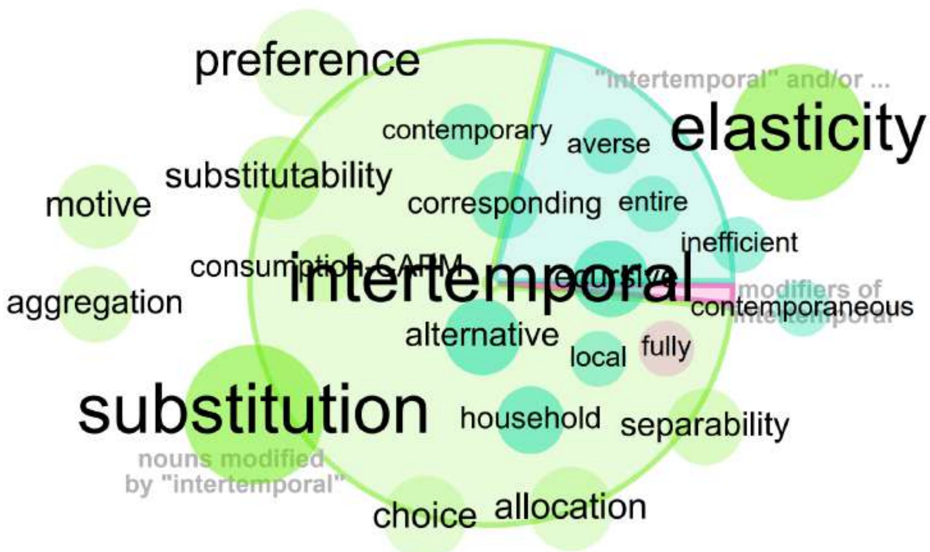



Figure 3.7: some keywords of the AER/Econometrica selected among the first 50

The collocational graph should be red as follows: the higher is the distance from the center the lower is the typicality score; the circle size indicates the absolute frequency of the collocation; each color represent a different grammatical relation between the node and the collocate; finally the slice size represents the number of collocations in a given grammatical relationship.
The lemma is important not only because it is a keyword but also because it is the most typical collocation of the lemma *preference* in AER/Econometrica. Moreover it is a way (together with the concordance) of checking whether this lemma is really referred to the temporal choice of the consumer. In terms of frequency the lemma is used mostly as a modifier of nouns such as *elasticity, substitution* and *preference*. But since the tipicality score is more important than absolute frequency in the LogDice scoring function, *substitution* turns out to be the most important node of *intertemporal*. This is clearly related to the fact that the papers involved are actually dealing with the issue of the temporal allocation of consumption, so agents choose how to allocate consumption over a time span. I comment here that it is quite understandable that the solution to an intertemporal maximization depends on how much the agents discount time; but this is linked to the way you think about the problem, the way of framing it. Once we put ourselves in this perspective the collocations are very logical and coherent with respect to the kind of literature we are analyzing.
Looking in particular at the nouns modified this keywords it is clear that the choice (and the parameter representing it: the elasticity of intertemporal substitution) between consuming today or tomorrow appears to be one of the most typical way of approaching the issue of consumption by AER/Econometrica. This

observation comes from the simple fact that all the nouns patterning with *intertemporal* (particularly those patterning more strongly) are actually referred to the agents' choices/preferences in general, and in particular to an optimal rule for consuming. Those nouns not referred to agents' choices are instead related to technical aspect of the model, to the utility function or to the equilibrium involved (e.g. intertemporal utility function and so on). But semantically they are all attributable to choices, in the sense that the maximization of the utility and the equilibrium output are the results of the sum of individual behaviors. From a humanistic point of view therefore emerges that, according to these journals one of the main characteristics of the consumer is to choose when to consume.
This tendency towards the intertemporal choices of this corpus is confirmed by other keywords such as *one-period, life-cycle, multiperiod, discouonting, infinite-horizon* and so on (compound words are considered as single words) and by the presence of the strings *life cycle hypothesis* and *permanent income hypothesis* as we will see later, indeed these are both models triggered by time preferences. We also find *martingale* and *recursive* with an high keyness score. Fact revealing the influence of R. Hall (1978) in this literature. It can be said that Hall really shaped this research field, as far as he provided the analytical framework of the problem. Among other things, this relationship between present and future consumption allows mathematically to recursively solve the optimization problem, as mentioned in the introduction. The Word sketch difference of *expectation* and the collocations of *random* in AER/Econometrica confirm the importance of R.Hall: the second collocation of *random* according to the LogDice score is *walk* which is a way of saying that since consumers have rational expectation: changes in consumpiton level are unpredictable, i,e, they follow a random walk. This view of consumption imply that since consumers use optimally all the information, they will be surprised only by unpredictable event and the consequent change in consumption is out of their planes. My comment here is that this is another tautological reasoning. This theory has implications for economic policy, the sum Friedman's of PI hypothesis and R.Hall rational expectation one, implies that only unexpected policy changes influence consumption.
The modifiers of *preference* cannot be excluded from the evidence that lead me to point 2:

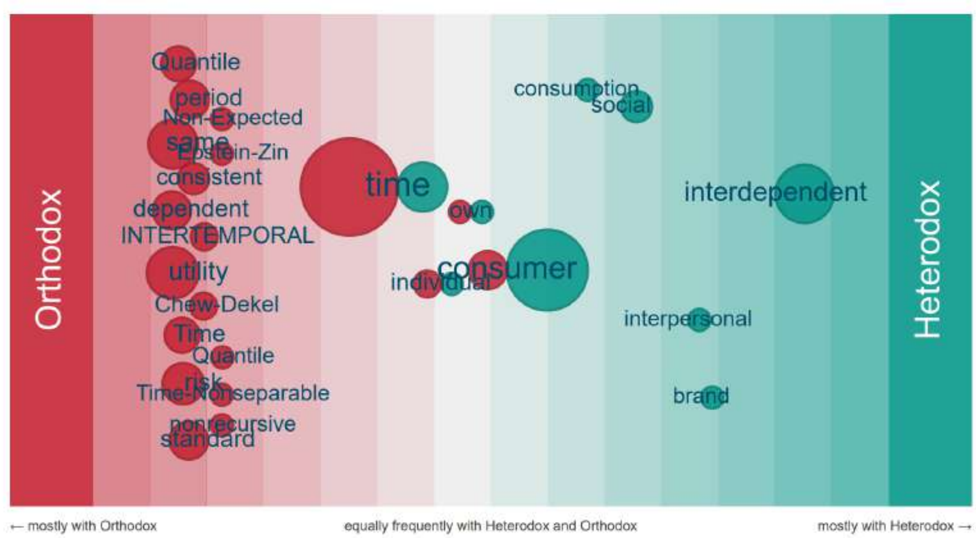



Figure 3.8: WSD of preference

It is rather clear which are the underlying aspects these theories focus on: AER/Econometrica on an

isolated consumer who makes temporal choice of allocation. And some technical aspects of preferences. JEI on a socialized consumer, whose preferences are somehow endogenous to a reference group or more generally to society.
Comparing the way the corpora collocate the lemma *consumption* is very insightful and strengthens the interpretation that AER/Econometrica are much more oriented towards the individual and intertemporal consumption, while JEI sees consumption as a social process.

The strongest collocations of *consumption* in the AER/Econometrica are *current* which is still a temporal determination and *smooth*. The latter appears both as a verb and as a modifier. It refers to the well known result in economics of consumption smoothing, elaborated around the 50' from Modigliani and Brumberg. It is a very famous result, also mentioned to confute it, therefore it is foreseeable that it is the strongest collocation in the orthodox corpus. Other very frequent collocations are *function* and *optimal*. Parallelly the word sketch of *optimal* has the largest circle in the collocate *consumption*. Indeed the string *optimal consumption* is one of the most frequent one in the corpus with 152 occurencies and a keyness score of 185.5.

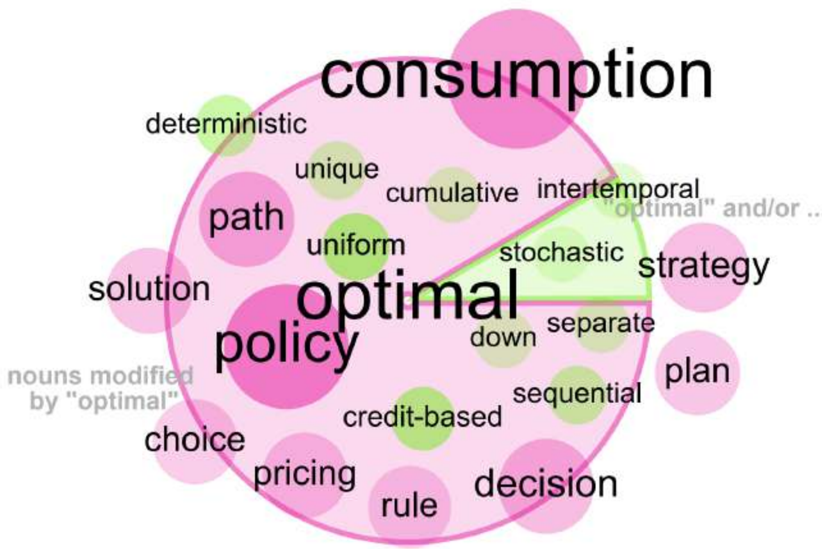
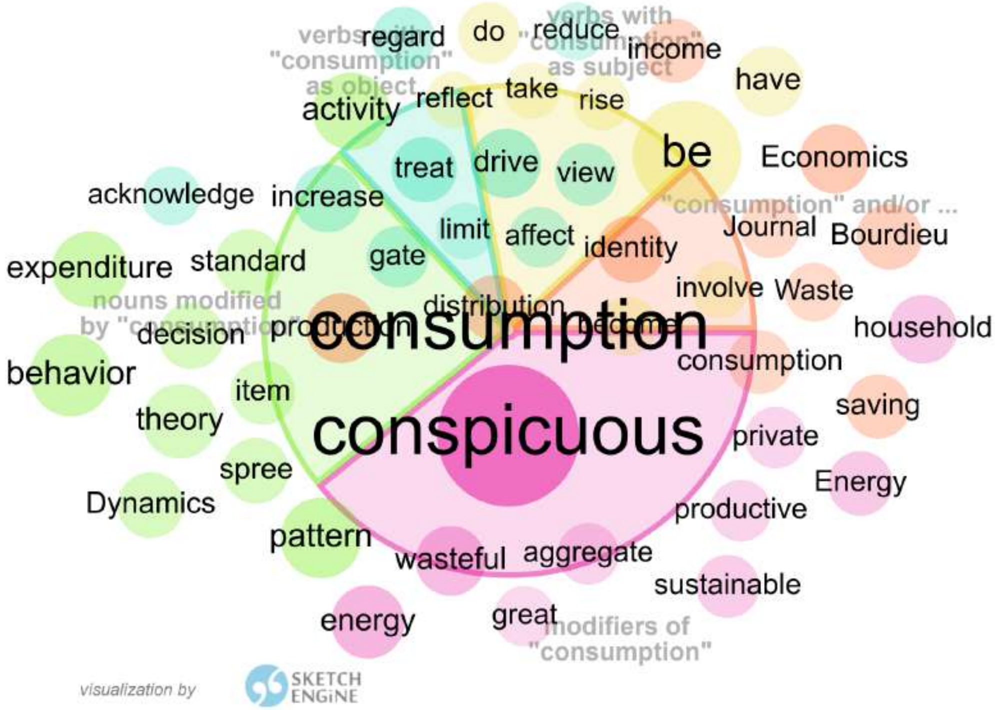



Figure 3.10: Word sketch of *optimal*

The collocational results reveal that optimality is a benchmark for evaluating in few cases the policy interventions and more often a driver for consumer's choices (*rule, choices, behavior*), as we will see later. The lemma *optimal* has a relative density of 129.6% in AER/Econometrica and 3.09% in JEI (802 and 15 occurencies). Most of the occurencies in JEI refer to a general discussion on the optimal control theory.

[b]0.6




[b]0.6

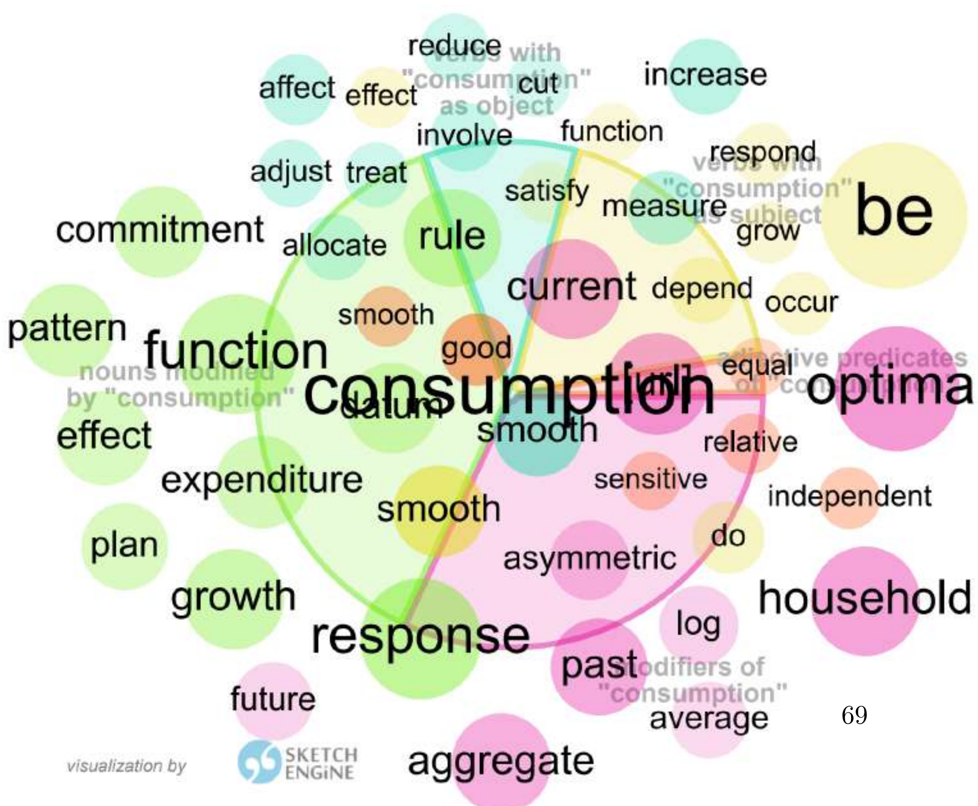





Figure 3.9: The left figure refers to JEI, the right one to AER/Econometrica

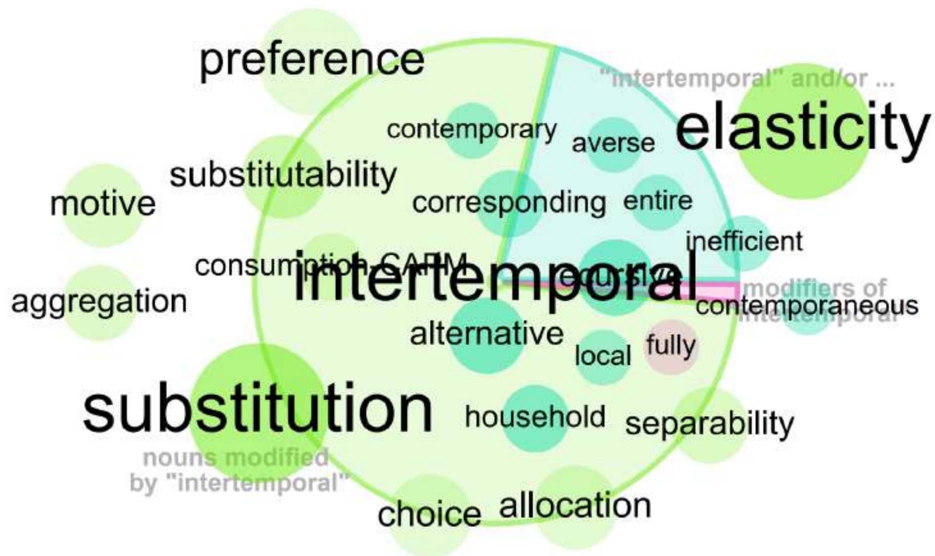



Figure 3.11: some keywords of the AER/Econometrica selected among the first 50

The collocation of *consumption* with *relative* could lead to think that in this corpus too attention is paid to the comparisons between individuals and so to the social nature of consumption. Actually the concordance tool reveals that the 6 occurencies of consumption with relative always refer to the future consumption compared to the past; and in two cases to the habit formation models.
For the lemma *consumer* something similar comes out: the verbs with consumer as subject are *learn, perceive* and *emulate* for JEI and *purchase, respond, maximize* for AER/Econometrica. The former are related to the semantic field of the social environment, the latter to an autonomous choice.
In JEI the lemma *consumption* presents many collocations referring to the social influences on consumer choices. The strongest collocation among "and/or" categories is *identity*, which recall a quite recent sociological issue of the link between consumption and identity in contemporary societies. Among the modifiers instead *wasteful* and *conspicuous* (which is the most frequent collocation in JEI) are in the same perspective of consumption as a social communication and are both Veblenian concepts. Conspicuous is also the most frequent attribute of consumption. From the figure we see a lot of others adjectives related to the social sphere: *status-driven* and *emulating*. Also *substainable* refers to a discussion of JEI about the green issue. The fact that among the keywords of JEI there is also the word *vicarious* indicates a certain degree of depth of some theories. Specifically, this word refers to the Veblenian concept of *vicarious consumption*, that consumption by proxy through which an individual maintained or subordinated/dependent of another one, shows the greatness of the latter (his/her master) through the conspicuous leisure or consumption. The ideas of Veblen usually entering the economic literature are the notions of conspicuous consumption, conspicuous leisure and status, but often referred to the single individual who signals his own status through these two forms of ostentation. Instead, the concept of *vicarious consumption/leisure* recalls even more the social character of consumption, in this case inextricably linked to a relationship between several individuals. Sometimes it is power relations, as domestic-master-x, or a family relationships (working husband and

wife flaunting the status of the family to x).
In addition to the word *habit* (with Keyness score equal to 33.2) that was already present in the Orthodox corpus, here we also find the word *habitus*, in twenty-sixth position with a score of 111.4. *Habitus* did not appear in the orthodox corpus (0 occurencies). The *habitus* concept has nothing to do with the *habit* intended as repeated behavior or development of regular behavioral patterns in purchasing choices, which instead is present also in the AER/Econometrica corpus. The difference between these two lemmas is another proof of the first part of point number 2.

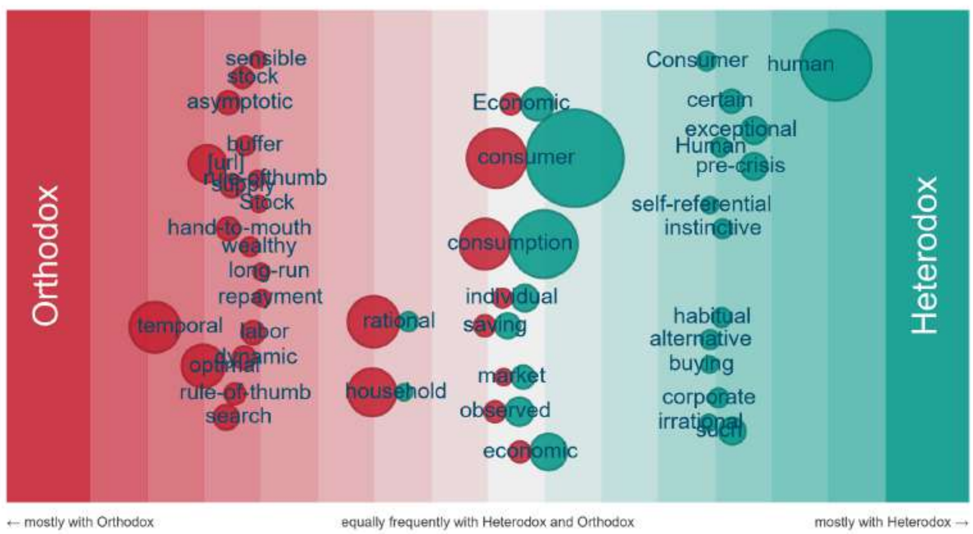



Figure 3.12: w.s.d. modifiers of behavior

In this figure there are some keypoints resumed: the higher determinism (*rule of thumb, hand to mouth*), the objectivity, rationalism and the temporal framework of AER/Econometrica; JEI instead reveals a language closer to the semantic domain of subjectivity, to the imperfection and the indeterminateness of human behavior and to other human features like instinct.
There are some modifiers that are not directly related to consumer behavior, for instance *stock* refers to buffer stock behavior, which emerges if consumers with important income uncertainty are sufficiently impatient. Let's now move to analyze the optimality and rationality of the consumer in AER/Econometrica, against the concerns for status of the consumer in JEI.
Let's start from the word sketch difference of the modifiers of *consumer*:

**verbs with "consumer" as subject**

| | | | | |
|---|---|---|---|---|
| learn | 7 | 0 | 9.5 | — |
| want | 7 | 0 | 9.5 | — |
| perceive | 5 | 0 | 9.1 | — |
| pay | 5 | 0 | 9.0 | — |
| emulate | 4 | 0 | 8.8 | — |
| choose | 6 | 10 | 9.0 | 10.0 |
| face | 4 | 8 | 8.5 | 9.8 |
| purchase | 3 | 14 | 8.3 | 10.8 |
| die | 0 | 4 | — | 9.1 |
| react | 0 | 5 | — | 9.5 |
| visit | 0 | 5 | — | 9.5 |
| respond | 0 | 6 | — | 9.6 |

**modifiers of "consumer"**

| | | | | |
|---|---|---|---|---|
| conspicuous | 30 | 0 | 10.5 | — |
| individual | 13 | 0 | 9.6 | — |
| household | 6 | 0 | 7.8 | — |
| many | 3 | 4 | 7.6 | 8.1 |
| more | 0 | 5 | — | 7.9 |
| few | 0 | 3 | — | 8.5 |
| marginal | 0 | 7 | — | 8.9 |
| wealthy | 0 | 3 | — | 8.9 |
| habit-forming | 0 | 3 | — | 9.5 |
| inattentive | 0 | 3 | — | 9.5 |
| heterogeneous | 0 | 4 | — | 9.7 |
| informed | 0 | 4 | — | 9.9 |
| hand-to-mouth | 0 | 5 | — | 9.9 |
| rule-of-thumb | 0 | 8 | — | 10.8 |
| representative | 0 | 12 | — | 11.1 |

Figure 3.13: wsd tables consumer

Among the modifiers there is *conspicuous* which is unequivocal, while on the other hand *representative* is iconic of the orthodox corpus.
Going on with this lemma: among verbs with *consumer* as subject not appearing in the figure, there are some indicative: *maximize, decide* and *observe* for AER/Econometrica and *seek, desire* and *engage*, here too we see the link, here too we see that JEI is lexically richer than AER/Econometrica, indeed the difference between *seek* and *search* is that the former is about an object, the latter about a place.

**nouns modified by "consumer"**

| | | | | |
|---|---|---|---|---|
| boycott | 49 | 0 | 10.7 | — |
| theory | 38 | 0 | 9.4 | — |
| demand | 65 | 9 | 10.8 | 8.9 |
| debt | 63 | 12 | 10.5 | 9.0 |
| spending | 34 | 6 | 10.0 | 8.8 |
| behavior | 108 | 40 | 10.9 | 10.1 |
| choice | 34 | 11 | 9.9 | 9.4 |
| credit | 78 | 31 | 11.1 | 10.9 |
| finance | 33 | 11 | 10.1 | 10.0 |
| durable | 0 | 4 | — | 8.8 |
| surplus | 0 | 17 | — | 10.6 |
| search | 0 | 21 | — | 11.1 |

**consumer's ...**

| | | | | |
|---|---|---|---|---|
| rate | 6 | 0 | 10.9 | — |
| taste | 4 | 0 | 10.4 | — |
| repair | 3 | 0 | 10.1 | — |
| decision-making | 3 | 0 | 10.1 | — |
| want | 3 | 0 | 10.0 | — |
| preference | 7 | 5 | 10.8 | 10.2 |
| behavior | 4 | 8 | 10.0 | 10.9 |
| decision | 3 | 8 | 9.7 | 11.0 |
| wealth | 0 | 5 | — | 10.4 |
| value | 0 | 5 | — | 10.5 |
| utility | 0 | 10 | — | 11.4 |
| problem | 0 | 13 | — | 11.5 |

Figure 3.14: wsd table consumer

I did not insert the table of verbs having *consumer* as object but it is another proof of JEI's lexical richness and usage of terms typically referred to human behavior: *encourage, affect, motivate, drive, provide, expect*, while in AER just *suppose* and *attract*.
From keywords' analysis emerges precisely the attention paid to the concept of optimality mentioned above. The word *optimal* has a score of 86.6 and the word *maximization* of 60.7 (both high scores, they are among the first 50 keywords).
These are the first keywords (in decreasing order according to the keyness score) we find semantically referred to the individual behavior.
The collocational analysis of *optimal* highlights important patterns in the sphere of agents' choices: lemmas as *strategy, plan, decision, choice, pattern, rule* and *solution* are all nouns modified by *optimal* linked to individual or collective (when the subject is a policy maker) choices. They are also the strongest collocation (LogDice score) of *optimal* in AER/Econometrica. Also other nodes modified by *optimal*, actually refer to the choice's semantic field: *path* for instance refers to the optimal consumer's purchase path as a completely planned path.
Typical N-grams methodologically/technically linked to *optimality* are *dynamic programming, value function, bellman equation* and *optimization problem.* It is not surprising that *value function* has a keyness score higher than the others two, because no one of these N-grams appear in the reference corpus (0 occurencies), so the difference in the absolute frequency between the keywords of the focus corpus matters more.
Also *expectation* is used in a way that confirms the rationalism of AER/Econometrica in contrast with JEI.

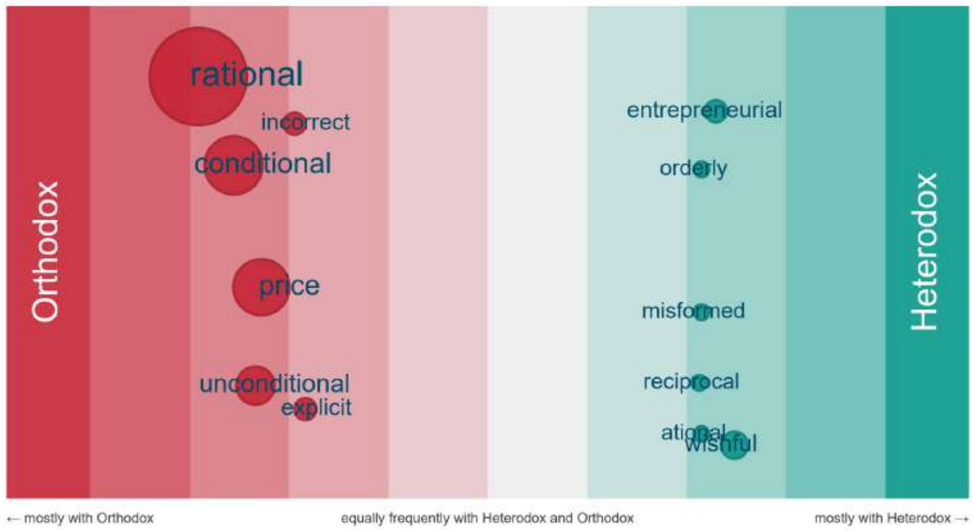



Figure 3.15: Word sketch difference of *expectation*

*Reciprocal* refers to the Habermas concept of reciprocal expectation: the fact that social knowledge is governed by binding consensual norms. This is another evidence of JEI's greater lexical richness with respect to the other corpus. From this figure we can clearly deduce that AER/Econometrica refers to the sphere of rationality and JEI to some forms of bounded rationality. IN AER/Econometrica indeed the most typical collocation of *expectation* is *rational* (with a LogDice score significantly higher than all the others) and generally speaking all the modifiers of this word are related to the sphere of rationality (*incorrect, conditional, unconditional*). There are several way of forming expectation, for instance the adaptive expectations, and all the other forms of expectations typical of behavioral /evolutionary economics that takes into consideration the cognitive bias, fallacies and the bounded rationality of the agents, or the history of past actions and payoffs. But looking at the collocations, it seems that in this corpus the behavioral and evolutionary streams are not represented, at least in the way expectations are defined.

The word *behavior* has two grammatical categories on which it is worth spending 2 words: the verbs with *behavior* as object and the modifiers. Among the verbs those of JEI are *guide, shape, emulate, drive.* Shared verbs are instead *affect, influence* and *explain.* In AER/Econometrica the strongest patterns are with *optimize, characterize, model* and *imply.* The modifiers are in line with the interpretation number two: *temporal, optimal, asymptotic, rule of thumb* in AER/Econometrica. And *human, exceptional, instinctive, irrational* and *cultural* for JEI. *Rational* is shared, but occurs 30 and 4 times respectively.

Actually the concordance reveals that the collocation *influence behavior* is just in one document and it is referred to a seller who influences the searching behavior of the consumer through observable prices.

The collocations denoting the importance of rational choice theory in this corpus are mainly those of *choice, decision* and *behavior.* There is no collocation suggesting a link between these two journals and behavioral economics. Missing words in AER/Econometrica that may be related to the behavioral economics field are for instance *myopic, time-inconsistent, hyperbolic discount*, imperfect information in financial markets, and any word related to the semantic field of preferences interdependence.

In JEI instead lemmas as *myopic, hyperbolic* and the most important *bounded rationality* appear much more. This is true also for the lemma *irrational*, which patterns strongly with behavior. Verbs like *feel* and *perceive* occur much more in the JEI than in AER/Econometrica, while the opposite holds for verbs such as *prefer* and *choose* (this last verb in particular occurs relatively 356.55 in AER/Econ and 86.64 in the

JEI), which are often related to semantic field of determinism. Obviously I checked the concordance to be sure that these verbs have as subjects *consumers*, *agents* and *individual*. This observation is linked to the subjectivity of JEI with respect to the objectivity of AER/Econometrica.
In AER/Econometrica *optimize* and *rational* are two of the collocates of *behavior* showing this kind of tendency towards rationalism of the corpus. About *choice* instead the collocates suggesting a form of rationalism are: *optimal, intertemporal* and *riskless*.
Also the lemma *decision* patterns strongly with *optimal* in AER/Econometrica. For all the collocates of *optimal* the concordance reveals that the adjective is used in its economic sense as cost minimization or utility maximization (both in a static and a dynamic framework).
In a nutshell, rational choice theory is seen to be influential in AER/Econometrica (particularly from the modifiers), but at the same time verbs having *behavior* and/or *choice* as an object reveal an opening to a possible external influence on consumer searching behaviour or at least to a variety of possible searching behaviors (often related to price influence, and not to a marketers activity for instance).
The collocations of *agent, good* and *utility* confirms that AER/Econometrica deal with optimality (mostly the intertemporal one) and JEI with status, positional goods and social meanings. The Word sketch difference of the modifiers of *good* is attached below:

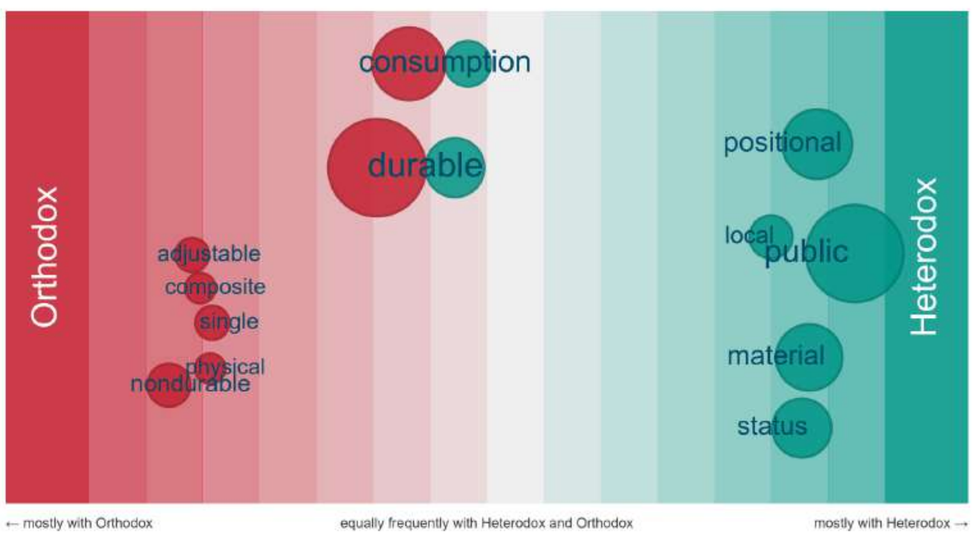



Figure 3.16: Word sketch difference of *good*

The figure shows that the collocations in red refer more to objective properties of the goods, while those in green are linked to the prestige.
In the JEI there are some lemmas as *taste* (relative frequency 331.01) and *desire* (relative frequency 349.06) that in the other corpus are much less frequent: 56.66 and 67.67 respectively. Other evidences of the tendency towards the rationalization of the orthodox corpus are n-grams as *felicity function*, *rational behavior*, *belief selection*, *consumption rule consumption plan*, *decision problem.* These are all expressions that indicate a tendency to rationalize and objectify even decision-making processes that have psychological, sociological and anthropological characteristics. Kanheman's book Daniel (2017), which is quite diffused in the academic literature, does not seem to be taken into account by these journals in studying consumption. This is just an example of a rational choice theory's critique that is not taken into account, but there are many examples of it in different fields. For instance in the economic one, is natural to quote Herbert Simon.

I am not here to make a list of all the theories that deviate from rational choice or criticize it, because it would be infinite.
I verified through the Concordance function that the N-grams referred to the sphere of rationality and rational decision maker were not in negative formulated propositions.
The analysis of the lemma *rule* enforces this conclusion about the rationalism in studying the topic of consumption by AER/Econometrica.

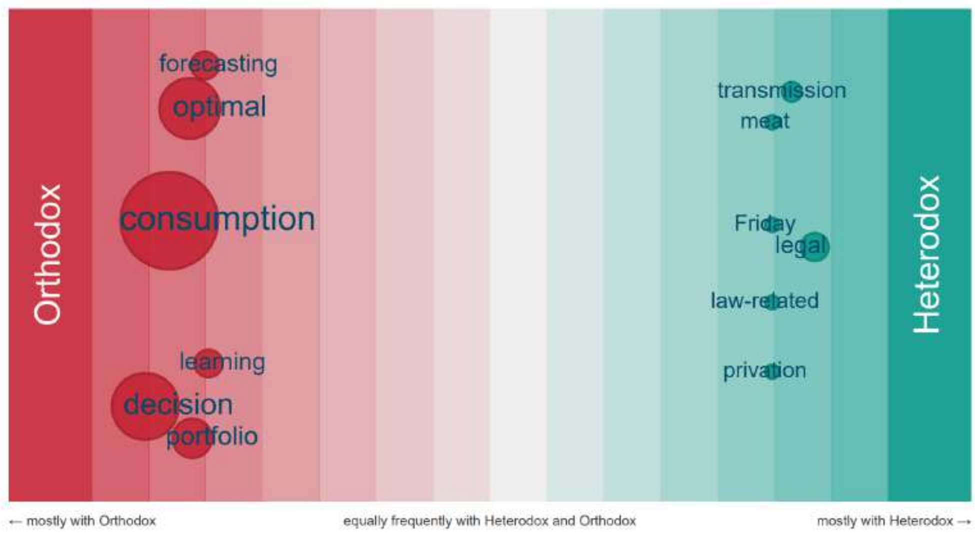



Figure 3.17: Word sketch difference of the modifiers of *rule*

In particular the modifiers of AER/Econometrica are all semantically related to some ways of behaving (*decision, forecasting, learning* and *consumption*, whilst this is not the case in JEI, where the lemma patterns strongly with collocates related to the semantic sphere of law and juridical categories. In this sense it seems that the economic orthodox theory needs to find some regularities in behavior. Whether this is a way of achieving meaningful results in terms of mathematical modelling or a realistic description of society, remains an open question. Surely there are many experimental and empirical works that question behavioral regularities in consumption. In any case there exists several forms of behavioral regularities: objective and rational regularities, the simplest of which is to buy the good/service that costs less (with perfect or imperfect information). Or subjective (or at least with no analytical proof) and sociological regularities, such as the *habitus* of the consumer in question, his model of social distinction, of inscription in society.
I will now go on in showing the empirical evidences of the statements of point 2 on AER/Econometrica, and then move on to empirical evidence in support of the statements of point 2 about JEI.
In the orthodox corpus the strongest modifier of *agent* is *representative*, this 2 lemmas also constitute a multikeyword of this corpus, appear in six documents (relative per million frequencies is 37.77) and are never discussed in negative formulated sentences or in theoretical debate about the concept. In JEI instead they appear in two documents with 2 occurencies overall (relative frequency 4.01) and is inserted in debate that criticize the representative agent abstraction.
The collocations of *representative* patterns with lemmas similar to *agent* in the orthodox corpus: *buyer, consumer* and *household*, in total the relative frequency of this concept (representativness + the semantic

field of an individual) is 37.77.
The collocations of *consumer* (in particular the modifiers *heterogeneous* and *habit forming*) reveals that these contemporary neoclassical approach pays attention to the variety of consumer habitual behaviors and analyze (as the concordance of *heterogeneous* shows) the implications of consumers that dislike sudden changes in consumption levels with different weights among them, basically it is an heterogeneity with respect to time preferences. The concept of agents heterogeneity is applied in two financial papers.
Also the idea of Bayesian learning agents is present in the corpus even if the string *bayesian learning* belong to just one document.
The string *habit formation* occurs 172 times and in general more other lemmas and collocations shows the attention paid by AER/Econometrica to the habitual behavior, for instance: *habit model* and *habit forming*. The openness to agents heterogeneity and to the concept of consumption habits, firstly introduced by Duesemberry, are in fact two relatively recent advances in mainstream theory. *Habit formation* has a relative density of 124.58% and 9.49& in AER and JEI respectively. Remind that a value below 100% means: less frequent in this text type (orthodox subcorpus) than in the whole corpus (not typical of this text type), while a value above 100% means the opposite.
The two major economic hypothesis shaping the debate in AER/Econometrica about consumption turn out to be (from the keyness score and the collocation of *hypothesis* and *theory*) the Life-cycle one of Modigliani and the permanent income one of Friedman (whose names are among the keywords). Moreover, the *Permanent income* N-gram is the seventh most typical in this corpus with a keyness score of 122.1 and 102 occurrences. In general, among the selected articles, AER/Econometrica look at consumption mostly from a macroeconomic perspective.
Anyway the main feature of the agents in AER/Econometrica together with the intertemporal choice discussed above is the fact that they are fully informed maximizers. In other words the type of social (or individual) action through which these models are triggered (move) is the utility maximization into a temporal framework. This reflects the neoclassical theory behind, that is, the determination of prices and production through the model supply and demand, with the demand simulated starting from the concept of maximization.
In this sense it seems that studying economics means also imposing the economic reason to society. This empirical result poses a reflection: does studying society from an economic point of view means imposing the hypothesis that the whole society moves on according to economic principles? This predisposition coincides with a production of reality (performativity), and not only with an attempt to explain it.
These journals postulate the a precise consumer behavior. Each decision has a calculation behind, consumers are able to look at the entire life cycle and make calculations that optimise utility not in a circumscribed way, but generically. So it is not only a matter of rationality but also of perfect information and rational expectations. This *homo oeconomicus* setting clashes with some studies that proved the importance of emotions in decision making process, for instance in the financial markets. (Kuhnen and Knutson (2005)).
Of course it is not only a problem of lacking of emotions. A wide interdisciplinary literature, relying also on empirical and experimental evidence, shows that this conception of man is unrealistic. For instance: Tversky and Fox (1995)
The orthodox corpus only look at the absolute aspect of consumption by enriching the utility function with new notions such as that one of habit, of felicity and of preferences' heterogeneity. But all these features entering the utility function refer to an isolated consumer and the word *conspicuous*, *positional* and *interdependent* or *intersubjective* (three very significant words in the other corpus) appear respectively 3, 0 and 0 times.
Moving to analyze the JEI instead: the strongest collocation of *agent* is *prestigious* among the modifiers and *imitate* among the verbs. The lemmas *status* and *identity* have an high relative frequency and are semantically related to consumer choices.
In addition to the word *habit* (with Kyeness score of 33.2) that was already present in the Orthodox corpus, here we also find the word *habitus*, in twenty-sixth position with a score of 111.4. *Habitus* did not appear in the orthodox corpus. It synthetically refers to a series of behavioral pre-dispositions, mostly unconscious,

that allow to have a common perception of some social practices, moreover the *habitus* are models of distinction (Bourdieu (1987)). The *habitus* concept has nothing to do with the *habit* intended as repeated behavior or development of regular behavioral patterns in purchasing choices.
The syntax graph of the collocations of *preference* in JEU is one of the greatest evidence of its view of consumption as a social process:

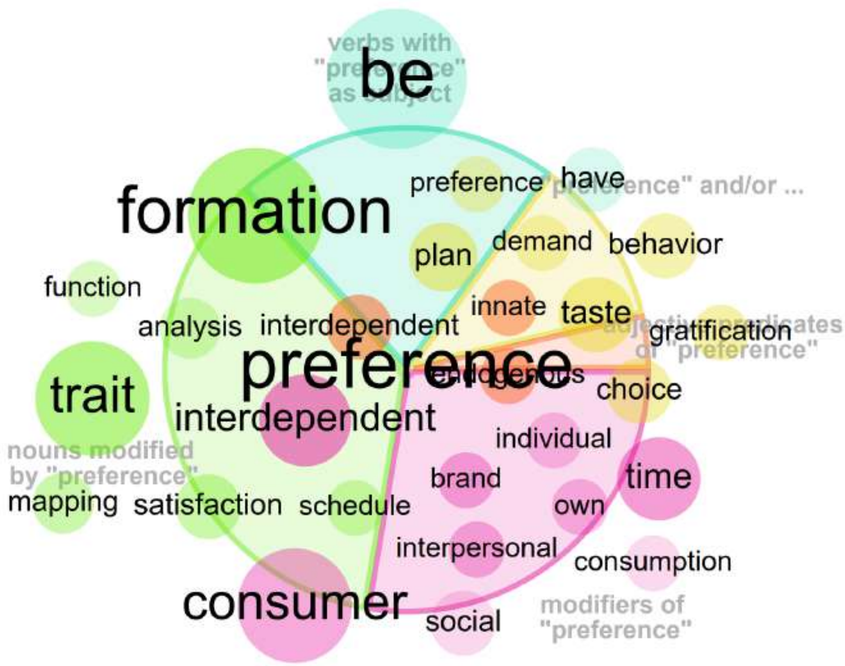



Figure 3.18: Word sketch of *preference* in JEI.

Remind that the adjectives are predicates of nouns while modifiers is a wider category including also phrases. This is the reason why *interdependent* appears twice.
(Multi)keywords such as *Life-style, class identity, individual identity, social identity, personal identity, habit of life* and *social significance* are empirical results that confirm the interest of this journal for a current topic in sociology: the link between consumption and identity in contemporary society. While the two most characteristic economic assumptions of this stream are the *relative income hypothesis* of Duesenberry and the *financial instability hypothesis* of Minsky. The *permanent income hypothesis* of Friedman is mentioned, but discussed and contested, if you look at the concordance.
String with an high keyness score are also *cultural evolution, institutional discrimination* and *income/wealth inequality*, the latter occurs togheter with the keyword *Piketty*. All these string show the variety of issues discussed in this corpus: from the inequality to the istitutional equilibrium concept, up to the evolution of cultural traits. The discussion about the intellectual property rights and intangibles is also emerging. In addition to the richness of language greater than the other corpus also emerges an attempt to have a holistic approach to the theme of consumption. I am here attaching also the complete table of multikeywords since looking at it is one of the best way to form an idea of the linguistic features of the journal.
Another theme that emerges (from strings like *economic profession* or *professor of economics*) is the sociology of economics understood as the study of the typical behaviors of economists and professors of economics

from a constructivist point of view.
The strongest collocation of the lemma *pecuniary* is *pecuniary emulation* which is actually an expression coming directly from Veblen and Mills (2017). Another interesting keyword is *invidious* in thirty position, which gives an idea of the weight of the Veblenian tradition in this journal, but is used in a rather predictable way (it patterns strongly with *distinction* or *comparison*). The modifiers of the lemma *rationality* in JEI are insightful: *instrumental, cognitive* and *bounded* are the strongest. Rationality is a concept discussed and integrated with a variety of disciplinary approach as we will see later, anyway it is criticized in JEI.
*Trickle-down* has a score of 53.1 and refers mostly (looking at the concordance) to the sociological (and not the economic one) trickle down theory: the fact that tastes pass from an upper class to the lowers one after a period of time. Only in one document it is referred to the economic trickle down: that economic theory highlighting the tax burden of the richest, benefits filter down towards the lower social strata. This string, when it is used in the sociological sense is also compared to the *trickle-round* described by Bourdieu, which is circular and involves the passage of tastes from the working class to the privileged one.
*Obsolescience* and *rentier* are two of the keywords that show the greater variety of language and issues of this corpus compared to the other. Here are respectively referred to the planned obsolescence of some consumer goods and the flows of rent provided by the owning of capital. In general, consumption is analyzed from several points of view, according to an holistic approach.
*Leibenstein* is among the keywords because its article Leibenstein (1950) is a cornerstone of the institutional economic literature on consumption, and it enters the bibliography of several articles in this corpus (precisely 9). Keywords in this journal are much less related to the sphere of rational choice and calculus than keywords in the other corpus. Examples of these lemmas are: *snob, instinct, emulation, invidious, status driven, intersubjective* and *positional*. All these words are related to the social sphere. They can of course also enter the utility function and then relate to a form of calculation, self-interest and rationality. But it is still different than the calculations induced by the monad, isolated individual. These features are even difficult to be quantified. The lemma *maximization* is among the keywords, but it is never used in a mathematical statement, but only in discussing the views of some authors about consumption. this lemma is among the keywords as in the other corpus, but looking at the concordance it is used in a complete different way. In the orthodox corpus is used as a trigger of the model itself (mostly inside mathematical statement), here instead is used in theoretical discussions.
Most of the lemmas in the keywords lists are actually referred to the social sphere as related/determining consumption's choices. Look for instance at the following word sketch difference grapph of the nouns modified by *intersubjective/interpersonal*. In this case the word sketch difference is not used to explore the ways two different corpora use a lemma, but two explore how two lemmas (intersubjective/interpersonal) are used inside the JEI corpus.

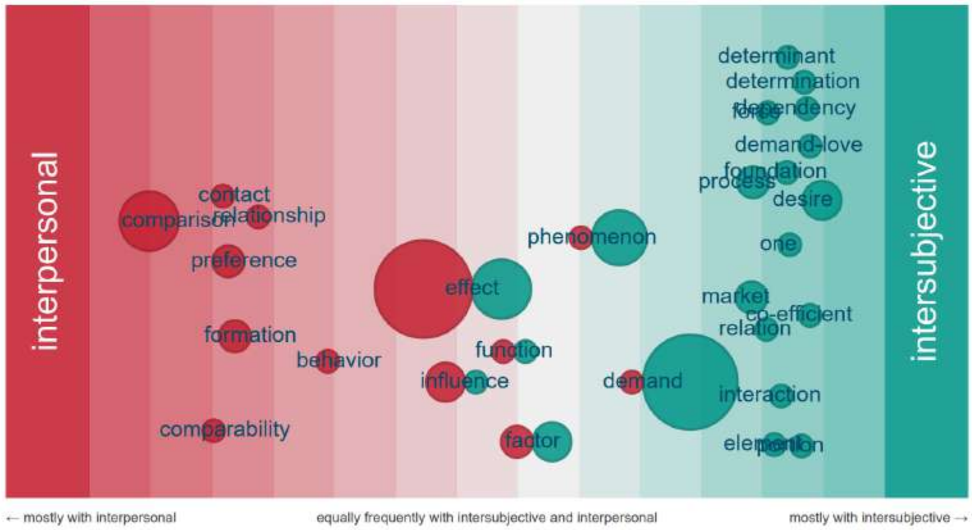



Figure 3.19: Word sketch diff of *intersubjective/interpersonal* in JEI.

Actually this is a way of showing the main collocations of these two modifiers in an unique representation instead of two. The differences in how they are used are related to a stylistic and semantic issue.
Another interesting and original keyword is *Minsky-Veblen* which refers to an attempt done specifically by one paper of combining three elements: the effective demand principle of Keyenes, the financial instability of Minsky and the conspicuous consumption of Veblen.
Names as Schumpeter, Kalecki, Kaldor, and Dudley Dillard suggest that in this journal appears an institutionalist monetary theory which assumes that money plays a central role in the economic process and are not neutral as in some NKDSGE models Ball and Romer (1990), this can be proved with the concordance of these authors names.
The keyword *unproductive* is referred to the Adam Smith's distinction between productive and unproductive consumption. *Consumerism* belongs to the keywords and indicates the consciousness that the other social sciences have identified a moment in the history of Western countries here consumption has taken on greater importance as a social glue. The keyword *socio-cultural* indeed are in line with the attention of this journal to the social process and institutional changes.
Other insights from the multikeywords of JEI are reported below. Of course some of the most frequent collocations of single keywords are confirmed, such as *conspicuous consumption* in the first position among multi keywords with a very high score (738.7). The value is probably higher due to the massive presence of the string in the Veblen's quotations, as checked through the concordance. This string stands out for the contrast with *optimal consumption* of the other corpus, fact that sums up everything I said about point 2. The Average Reduced Frequency of this N-gram is lower than the absolute one, meaning that there are some papers focused more than others on the topic of conspicuous consumption and in the veblenian tradition.
Multikeywords as *household debt, overindebtedness* and *consumer debt* confirm the importance given by this journal to the financial aspect of consumption in our developed society with an high level of consumer credit goods.
The role of institutions (both financial and cultural) in shaping the consumer behavior arises only in JEI, while is absent in AER/Econometrica, where financial institutions play an ex-post role, the mechanisms of consumer credit are never considered as trigger of certain consumer behaviors.

Looking at the overall tables of keywords, in particular strings, clearly emerges a strong tendency to rationalize the process of consumption by AER/Econometrica. Without taking into consideration the meanings (conscious or unconscious) that people give to goods and services, and more generally the different cultural contexts influencing consumption practices (for instance the attitude of Russian people to consume western luxuries). JEI consider institutions and cultural frameworks as possible triggers of consumption practices. The relative densities are 166.14% and 1.69% in JEI and AER/Econ. respectively,*culture* and *cultural* instead never occurs in the orthodox corpus and occurs 156 times (relative frequency 1,113.38) in the other one. All these linguistic facts constitute a sharp break between the disciplines and between the different perspectives of looking at a phenomenon that deserves a holistic overview.
Several empirical and experimental evidence showed that some choices are not rational and that frame elements influence the output (nudging). AER/E. although they take into account the evidence, they use a language revealing a clear tendency to rationalize these choices by reformulating everything in economic terms.

### 3.4.3 Theoretical debate, need for legitimisation and interdisciplinary approach

Interpretation of results leading to point 3 and 4 will be jointly presented. There are several evidences that JEI has a tendency to discuss a wide range of theoretical approaches and quote a lot its own (the instituionalist one), while AER does not discuss much different approaches and theories, not even those they actually adopt. I anticipate my interpretation: AER/Econometrica does not need legitimisation of the theories behind their papers, while JEI is interested in discussing these topics, but this interest may be also interpreted as evidence that, being unable to produce good papers, the heterodox steam of literature writes obsessively about the "mainstream".
The first evidences leading to interpretation number 3 are the ways these two corpora use some lemmas (namely: *theory, approach* and *hypothesis*) and the keywords' tables. The first thing really jumping of the page is that the word *theory* appears much more in the heterodox corpus than in the orthodox one, relative frequencies are 1,947.07 and 385.08 respectively. This is also the case for *approach* with 481.46 of RF in the heterodox corpus and 262.82 in the orthodox one. The opposite holds for *hypothesis* with 355.68 and 262.80 of relative frequencies in the orthodox and in the heterodox corpus respectively.
Verbs with *theory* as an object or subject semantically refer to a discussion or hypothesis in the heterodox corpus, while they are more related to a deterministic sphere in the orthodox one: *reconsider, reject, propose* and *suggest* for JEI and *expect, imply, predict* and *enable* for AER/Econometrica. The same is true for *hypothesis*, which patterns strongly with verbs as *reject, satisfy, contradict* and *fail* in the orthodox corpus and *reposition, defend, found, ground, explore* and *examine*. From this we see the tendency to use verbs semantically linked to a form of determinism.
From the modifiers and the possessors of these lemmas we understand how the two corpora differ among them within the economic theories.

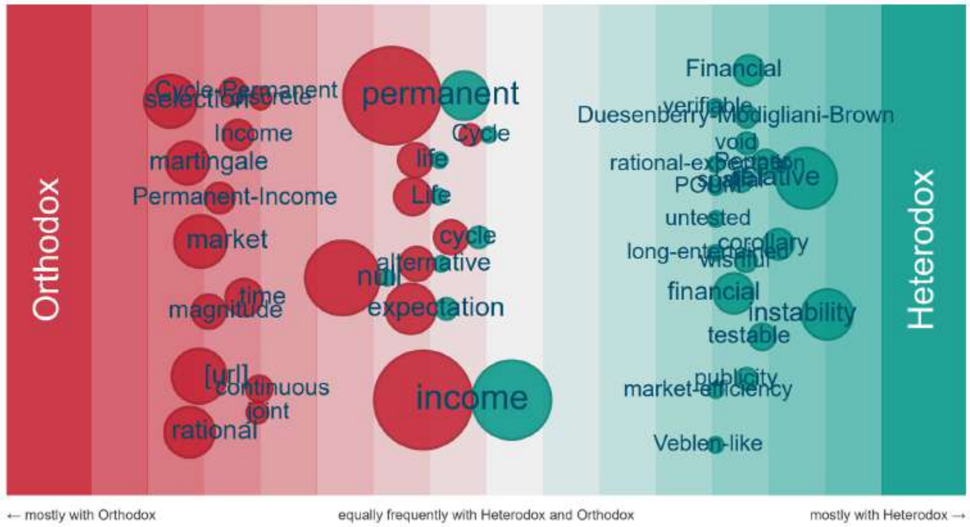



Figure 3.20: Word sketch difference of the modifiers of *theory*

Later we will see that the JEI unlike the other corpus is also very much related to other disciplines. Within economic theory, the analysis of collocations synthesizes the theories and hypotheses of one and the other corpus: Friedman's Permanent income, Modigliani's life cycle, and Hall's rational expectation are the most represented hypothesis in AER/Econometrica. JEI instead refers mostly to the financial instability of Minsky, the Duesemberry's relative income hypothesis and the Veblenian conspicuous consumption.
The word *theory* in the heterodox corpus is associated (in conjunction or with its possessors) with a lot of authors' personal names: *Veblen, Bourdieu, Galbraith, Foley and Keyenes.*
The results of the grammatical relationship of specification (theory of...) is quite interesting, even if some results, namely *class employment* and *sentiment*, are clearly biased by the high number of quotations of *The theory of the leisure class* by Veblen, *The general theory of employment, interest and money* by Keyenes and *The theory of the moral sentiment* by Smith. Each specification of *theory* refers to a precise theory or author, so the fact reflected in the data is that the Journal of economic issues has a broader theoretical spectrum than the AER and Econometrica in terms of frequencies of author personal names, as it was suggested by the keywords dictionary. That's not all: these theories come from a greater variety of disciplinary fields. Looking at orthodox collocations, the main disciplinary fields involved is economics and statistics. While for the heterodox collocations the theories belong to the most desperate fields: sociology (*theory of action* by Talcott Parsons), philosophy (*theory of mind* by Locke), psychology (*theory of cognitive dissonance* by Leon Festinger), anthropology (*theory of cultural evolution*) and marketing (*theory of consumer behaviour*).

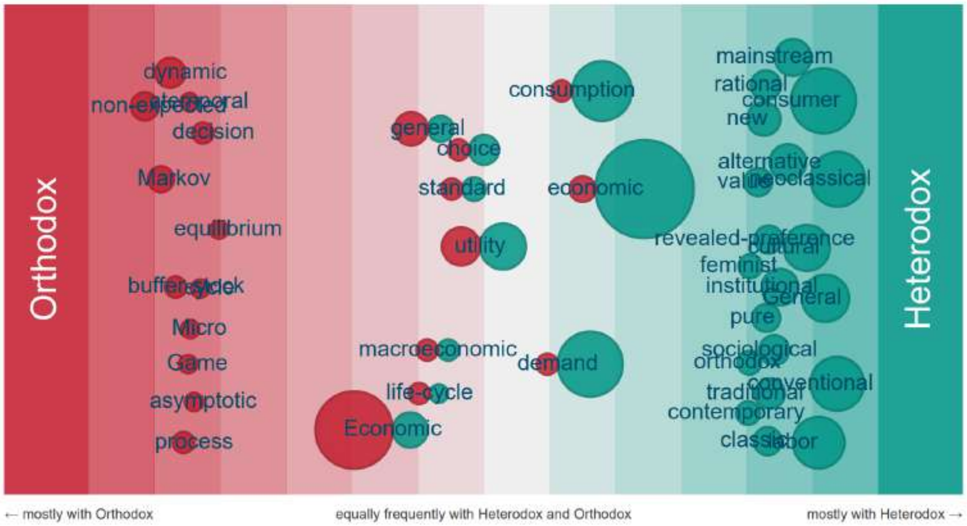



Figure 3.21: Word sketch difference of the modifiers of *theory*

Coming back to the WS difference of *Theory*, the main semantic clusters suggested by the modifiers consist in attributes that presuppose their opposite or at least the choice between two or more theories, and attributes that do not contemplate such possibility. Among the words in green background color the attributes of *theory* that imply an alternative theoretical vision are: *conventional, mainstream, classic, traditional, alternative, orthodox, different* and *comparison*. These attributes embody a comparison in their semantic nature, but there are others that instead *de facto* concern a comparison between theories or a discussion about a specific theory. Looking at the concordance, those attributes turn out to be: *institutional, neoclassical, rational, current* and *modern*. These are all tokens inserted in negative formulated sentence, or in comparative sentences except from the first one.
Among the modifiers of *theory* in the orthodox corpus attributes involving a comparison for their semantic nature are not there. While looking at the concordance the only two cases of discussion/comparison are: 1) the *search theory* collocation, referred to the difference between the theories on consumer's optimal strategy when choosing between potential alternatives. 2) A discussion about different version of non-expected utility theories (temporal or atemporal). Each of the two collocations belongs just to one document. The figure of the modifiers of *approach* is also interesting in order to understand the patterns of the lemma by the two corpora:

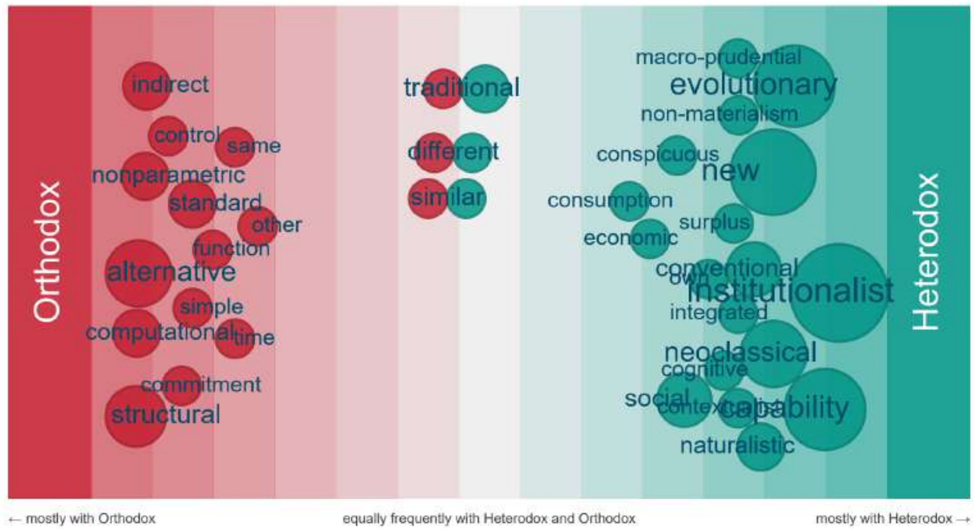



Figure 3.22: Word sketch difference of the modifiers of *approach*

Here too we see both the fact that the Orthodox corpus remains more closely linked to an economic sphere, and the greater propensity to the theoretical discussion of the JEI. *Computational, non parametric, structural, control function* show that AER/E. uses the lemma *approach* for discerning between different methods for solving a problem, while JEI uses it for distinguishing points of view.

The interdisciplinarity of JEI with respect to AER/Econometrica is revealed above all by the keywords. The first thing that jumps to the eye from the JEI keywords' table is the presence of a lot of authors personal names. These authors belong to different research areas/ or different economic approaches (Minsky-financial one, Veblen-institutional, Duesemberry as behaviorial economist, Kenneth Boulding for the evolutionary economics, Polanyi-anthropology and Bourdieu as sociologist, Hirschman - theory of economic development and behavioral theory, Bas Verplanken - social psychology). There is also the name of Keyenes. The presence of these authors among the keywords suggests an interdisciplinary approach of this journal in the attempt to deal with the issue of consumption.

Other authors who enter the keywords are Easterlin and Albert Bandura. The latter confirms the tendency of this journal to rely on other sciences, in this case psychology and in particular the theory of social learning. Richard Easterlin instead enters for obvious reasons concerning the economic literature on consumption, generally: for having discussed the relative aspects of happiness and income.
There is Galbraith in seventh place. One of the first to notice and talk about the art of creating the demand and the needs. This kind of production of needs is called *dependence effect* in *The affluent society. Dependence effect* is also the multikeyword number 181 with a score of 32.8.
Tibor Scitovsky (with a keyness score of 91.6) is an Hungarian economist known for his research on the relationship between happiness and consumption, in the spirit of Easterlin.
Kahneman's presence with a score of 55.5 conveys the influence of behaviorism in consumption's analysis by the Journal of economic issues. The adjective *istitutionalist* occupies the ninth position with a keyness of 162.5. The reason is mainly that JEI is an institutionalist journal. This stream of economic literature (institutional economics) discussed more than others about the issue of consumption (Veblen is considered one of its founding fathers), providing contributions that ranged across multiple disciplinary areas and

introducing concepts as positional goods or double-rival goods, status-driven choice and relative standing. *Positional* is also the keyword number 11 with a score 149.4. It is referred to the positional competition between consumers through status signaling and it is a deeply explored issue in this journal.
Minsky (keyword number 8) is an author whose importance has been rediscovered after the financial crisis (2007). In particular his financial instability hypothesis has been raised.
In general, interpreting the table of keywords shows that in the Journal of economic issues, consumption is analyzed mostly under the lens of institutionalist and behaviorist economists. The word *neoclassical* is a keyword, but the concordance reveals that it is inserted in negative formulated sentences, or in comparisons with other theories.
The same thing happens for Bentham, which is a keywords, but the author is often quoted to be disproved and/or to be compared with other authors. Since he provided the basis for the utilitarianism, he is naturally quoted discussing the differences between institutionalism, behaviorism and mainstream economics in the consumption's theory approach.
As a matter of fact, I am here writing of "consumption theory approach", but, as far as I know, there is no unitary attempt to put together the various theories: each disciplinary area has developed its own one.
I insert here the first ten authors personal names in both the corpora, for the JEI I had to scroll through the list until keyword number 15, for AER/Econometrica until keywords number 198.

| | | Frequency per million? | | Relative DOCF? | | ARF? | | |
|---|---|---|---|---|---|---|---|---|
| | Word | Focus | Reference | Focus | Reference | Focus | Reference | Score |
| 1 | veblen | 2,591.87 | 0.17 | 75.41% | < 0.01% | 432.87 | 2,525.91 | 2,219.9 |
| 2 | bourdieu | 601.83 | 0.29 | 16.39% | < 0.01% | 31.62 | 4,405.71 | 467.3 |
| 3 | duesenberry | 405.23 | < 0.01 | 21.31% | < 0.01% | 29.57 | 59.13 | 404.9 |
| 4 | minsky | 198.60 | 0.25 | 14.75% | < 0.01% | 13.40 | 4,228.49 | 159.6 |
| 5 | bentham | 196.60 | 0.54 | 16.39% | 0.01% | 15.88 | 8,796.93 | 128.2 |
| 6 | polanyi | 134.41 | 0.18 | 8.20% | < 0.01% | 8.08 | 2,588.47 | 115.0 |
| 7 | boulding | 122.37 | 0.07 | 3.28% | < 0.01% | 4.52 | 1,319.23 | 114.8 |
| 8 | easterlin | 94.29 | 0.03 | 9.84% | < 0.01% | 8.85 | 450.71 | 92.8 |
| 9 | bandura | 94.29 | 0.15 | 1.64% | < 0.01% | 1.75 | 2,336.59 | 83.1 |
| 10 | scitovsky | 80.24 | < 0.01 | 13.11% | < 0.01% | 11.37 | 103.18 | 80.7 |

Figure 3.23: Primi 10 autori tra le keywords del JEI

Among the first ten authors personal names in JEI there is a sociologist, a philosopher, an anthropologist and a psychologist.

| | | Frequency per million? | | Document frequency? | | Relative DOCF? | | ARF? | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Word | Focus | Reference | Focus | Reference | Focus | Reference | Focus | Reference | Score |
| 1 | euler | 193.58 | 0.84 | 14 | 14,764 | 34.15% | 0.02% | 33.59 | 11,413.46 | 105.5 |
| 2 | pesendorfer | 59.80 | < 0.01 | 2 | 115 | 4.88% | < 0.01% | 3.78 | 79.48 | 60.6 |
| 3 | attanasio | 61.38 | 0.05 | 7 | 1,375 | 17.07% | < 0.01% | 13.11 | 981.79 | 59.5 |
| 4 | galvao | 56.66 | 0.03 | 1 | 577 | 2.44% | < 0.01% | 2.82 | 457.44 | 56.0 |
| 5 | zeldes | 55.08 | 0.01 | 8 | 298 | 19.51% | < 0.01% | 12.17 | 223.79 | 55.5 |
| 6 | markov | 97.57 | 0.91 | 10 | 21,762 | 24.39% | 0.03% | 16.69 | 16,571.61 | 51.5 |
| 7 | nakajima | 64.53 | 0.30 | 1 | 6,712 | 2.44% | < 0.01% | 3.30 | 4,529.48 | 50.4 |
| 8 | eichenbaum | 50.36 | 0.02 | 6 | 576 | 14.63% | < 0.01% | 9.64 | 416.54 | 50.4 |
| 9 | newey | 53.51 | 0.09 | 3 | 2,179 | 7.32% | < 0.01% | 5.46 | 1,626.00 | 49.9 |
| 10 | chatterjee | 72.39 | 0.51 | 1 | 13,885 | 2.44% | 0.02% | 3.58 | 9,424.33 | 48.6 |

Figure 3.24: Primi 10 autori tra le keywords di AER/Econometrica

Here instead all the authors are from the economics field.
Summarizing this brief comparison between the two corpora, what transpires from the analysis is that the Journal of economic issues discusses the neoclassical approach, perfect rationality and so on; opens a discussion with the other stream of literature on consumption's theories, is in search of a debate. But there is no one to debate with, because on the other hand (Econometric and AER) do not bother to mention neither their main approach (neoclassical evolved in new-keyenesian) nor others (institutionalist, evolutionist or behaviorist for instance). Econometric and AER do not talk about approaches, they quote the authors from the neoclassical (often neo-keyenesian) school of thought, they are more self-referential. While the heterodox corpus talks about approaches continuously, often taking distances (first of all) from the neoclassical theory and the perfect rationality/representative agent assumptions. It's funny in this regard, the fact that in the heterodox corpus the word *neoclassical* is the tenth keywords with 154.8 score, while in the orthodox corpus is not even among the first 500 keywords even if it is its own theory. The same applies to the word form *rationality*: it is much more discussed in the Journal of economic issues than in the other two journals (4 occurencies in AER/Econometrica and 74 in the JEI). While the opposite is true for *rational*, which occurs 244 (267.79) in AER/Econometrica and 76 (173.28) in JEI (relative frequencies are in parentesis). The former indeed is a word form more suitable to be used in debate about the perfect rationality assumption, while the latter is more an operative attribute, not necessarily entering a theoretical debate.
Other evidence of this absence of debate in AER/Econometrica: trying to insert the lemmas *heterodox* and *orthodox* in the function word sketch we see that in the journal of economic issues they are contemplated words, even if not used with much frequency (38 and 12 occurencies respectively), while in the other two journals they never appear.
Others simple frequency analysis confirm this idea: *institutionalist* never occur in AER/Econometrica and occurs 74 times in JEI. While *behavioral* is more balanced with 31 occurencies in AER/Econometrica and 24 in JEI, but the relative frequencies are 41.69 and 72.96 respectively. *evolutionary* is much more frequent in JEI (174 occurencies) than in the other corpus (33). This interpretation comes not only from these lemmas frequencies, but also from an analysis of the authors cited in the two journals.
The lemma *need* which is at the bottom of neoclassical theory as it allows for rationalize the reasons for consuming, is significantly typical of the heterodox publications, while it occurs very few in AER/E. (126% and 32.54% of relative density respectively).
JEI draws, from theories and conclusions, some institutional policies (mainly fiscal policy) that may regulate the markets given the deviations from perfect rationality in consumer choices, but it analyze also cultural

institutions shaping consumption. The Orthodox corpus has some self-referential elements in the theoretical discussion and relies on an almost unchanged abstraction scheme (needs, preferences, and so on), which is integrated with the concepts of habit formation and agents/preferences heterogeneity.
Given these premises, the debate between the heterodox and the orthodox economics is likely to be sterile, because in the end, despite all the efforts of a faction, the intention to debate remains one-sided. The Orthodox do not need to debate its own theory: they are legitimized by the facts, by the importance of the journals they publish on.
After this brief analysis of the language related to a theoretical debate on the approaches, I try to draw a couple of possible conclusions.
You can have two points of view on this: one is that the heterodox approach is not able to produce an equally "valid" theory and so it exploits the success of the orthodox approach to earn visibility (obsessively talking about the other approach). Or you may think that, given the success of the NKDSGE in the academic literature and in influencing policy choices (the models used by EU policy makers are mainly DSGE and Var), the heterodox economists find important to talk about that approach precisely because of its influence on the real world. This last observation is linked to the fact that economic approaches are not only different ways of explaining economic reality, but they are also different ways of producing it.
At the bottom of this mechanism I guess there is the idea of the attribute "valid" referred to a theory: the validity of a theory is often established on the basis of its correspondence with empirical facts. It is also true, however, that sociologists like Berger and Luckmhan or philosophers-linguists like Searle have shown various aspects according to which the social reality is constructed (I could also recall a constructivist vision in the philosophical, sociological and generic sense). Or even more simply, I could pull out what language itself already tells us. E.g. that the fact is factitious, as its name indicates. Not completely and in different quantities, but there exists a facticity of the fact.
In the social sciences there is a form of reversibility whereby the way the world is theorized becomes a way of producing social reality. And this thing is absolutely not held presents by a certain naive empiricism. So to take as valid a theory based on its correspondence with empirical facts sincerely seems a naive intellectual attitude (justificative of the status quo) and basically a very American one (obviously it is also a translation of the abstraction scheme of the natural sciences into the social sciences). [2]
After this brief observations it can be retroactively said that the high presence of the lemma *institutional* in the JEI is not only due to the nature of the journal itself, but to the greater predisposition to talk about economic theories than to AER/Econometrica. For instance the lemma *neoclassical* is the (implicit) approach of AER/Econometrics, but it is much more frequent in JEI, and this hold for all the words denoting a particular economic approach. It is precisely the difference in the attitude towards the theoretical discussion between the two journals that determines the absolute frequencies of the attributes related to approaches, and not the theoretical paths behind the articles published.
My interpretation is that this is an advantage of the mainstream: it does not need legitimacy.
In this framework, is not secondary the social phenomenon, firstly identified by Weber, of the "doing" that is justified through the "doing" (work that justifies itself as far as it is work). And that in this case, it takes advantage of mathematics (absolutely noble science per se) and of its infinite potential in terms of the work that it can make you do to, obtaining nothing that could be of interest for a social science and for social reality. Self-referential works, quote clubs, academic papers that discuss nothing realistic, all this literature proceeds parallely to the social reality, without touching it.
It enters the social sphere only as academic work force; and as such produces a specialized language accessible to a few, which easily contributes to maintaining the exclusivity of the circle and the social distinction related to it.
The question arises: if the mainstream does not need to legitimize its own economic theory, where does its legitimacy come from? My answer would be: from the protestant ethic declined in particular ways, from the razionalization of society in Weberian sense and thanks to some peculiarities of the tool used (math), which, in itself, is a science I deeply respect, but that is erected to universal value and provides an alibi of

[2] On the naive attitudes of American culture see BAUDRILLARD, Jean. *Amérique.* Grasset, 2014.

objectivity that maintains the status quo.
Generally speaking my personal comment may also partially explain the importance given to the tools, which often overcome the contents, in the academic literature. There are a lot of jobs where the results/profits are direct functions of the effort. The fact that also the academic jobs (that should be an intellectual one, forbidden word in our democratic societies) follows this rule is ridiculous, and is an imposed fact. How is it imposed? Through the scientometric measurements, the importance given to tools, which overcome the contents, and a continous symbolic mortification (according to the symbolic logic we must be able to give back what is given us, and the data driven approach is a form of symbolic mortification). It is true that theses need to be scientifically proven, but it is also true that many social problems and many evidences can be solved with simple reasoning that does not need advanced methods to be proven, just the observation of reality e a moral position about the latter (see the critique in the second chapter of the bio-anthropological system of the needs that economics raises as the base of consumption: is enough to note that in some countries the production of profit requires the consumerism and somewhere else the same profit requires a deep poverty).

### 3.4.4 Other results

The relative frequencies of *equilibrium* tell us that it is a concept left aside by the JEI, while it is very present in the other corpus, which uses it often in a game theoretical framework.
Two other words sketch difference are applied to the lemmas *bounded, myopic, precautionary, borrowing, inconsistent* and *hyperbolic*. This is a set of words that entered the modern macro theory of consumption to fill in some descriptive gaps that this had. Evidence from psychological studies, empirical studies and laboratory experiments, for instance, showed that consumers make inconsistent inter-temporal decisions and they are not fully informed about financial opportunities (finacial sophistication). Jappelli and Pistaferri (2017).
The analysis of the collocations of these words reveals that the modern macro theory takes into account these inconsistencies with reality and tries to make up by introducing new concepts regarding: the social nature of preferences, financial inequalities (in the generic sense, both of informations and borrowing constrains), intertemporal inconsistency, non separability between consumption and leisure (some goods can be consumed and enjoyed more if you have more free time), precautionary motives for saving, life span uncertainty and intergenerational transfers. Seems quite crazy to think of exhausting, through a list, all the possible facets that individual consumer choices involve or may involve. However, word sketch difference results show that there is this attempt to integrate macro theories on consumption with empirical facts derived from statistics and experiments. The words I have analyzed are categorizations of these empirical facts that are found more in AER/Econometrica than in JEI, but they are mentioned in both. Only the string *bounded rationality* is relatively more frequent in JEI than in the other two journals.
About the lemma *inequality*, it is quite amusing that in JEI it often means social inequality, while in AER/Econometrica it refers to arithmetic inequalities. Anyway the relative frequency is almost double in JEI than in AER. *Unconscious* does not appear in AER/E while it occurs 11 time in JEI even if there some literature calling it in question about consumption Elliott (1997). The concordance reveals the reason why unconscious is involved: social meanings are often not explicitly formulated by speakers (consumers), at least not linguistically, but they remain at an existential level of representation.

## 3.5 Conclusions

The two analyzed corpora linguistically differ among them. These linguistic differences can be attributed to different theoretical views. The neoclassical one, which is typical of AER/Econometrica, has integrated the theory with some realistic ideas coming from empirical investigations (experiments included). Some principle of behavioral economics have been assimilated and are used mainly in the analysis of financial problems, there is no trace of behavioral economics principles in the analysis of non-financial purchases or in standard consumer problems. The JEI is a journal with an high number of quotations of authors from the most disparate research fields. Its main approach is the institutionalist one, but it embraces other approaches and theories, behavioral and marketing theories included. The language of JEI exhibits a greater variety and it is less technical than AER/Econometrica, it is more discursive, there is less math (tokens with respect to words) and great attention is paid to the interdependent, sociological and psychological aspects of preferences. In AER/Econometrica instead, attention is paid to the intertemporal aspects in a maximization framework, with habit formation and heterogeneity (in some cases).

I briefly repeated the empirical results and their interpretations: conclusions will be devoted to quickly understand how each economic approaches contributed to the theory of consumption in an history of economic thought perspective, and then I try to sketch a policy advice.

Among the classical economists consumption has been considered a marginal problem, subordinated to production, despite the famous statement of Adam Smith: "*consumption is the sole end and purpose of all production*". This may be partially explained by the kind of society they lived in, where only few people consumed in an affluent way and the majority was at a subsistence level. So the influence of consumers preferences on the market was a minor phenomenon. In Sraffa's most important work (*production of commmodities by means of commodities*), consumption is no more a problem since the level of production (and then of consumption) is fixed and known, but solving this problem is possible only through a great abstraction.

Neoclassical theories, whose main exponents were Jevons, Wicksell, Warlas, Marshall and Menger, analysed the consumer as an isolated individual, with his/her own preferences, capable of rational choices and of maximising his utility under the law of decreasing marginal utility. The epistemology behind these assumptions was based on the idea that the only objective and measurable criterion is the utility. Behind we can see the philosophy of Jeremy Bentham and his idea of coincidence between utility and happiness. Vilfredo Pareto introduced an interesting element: namely the concept of ordinal utility, different from the cardinal one since it is not numerically valuable. Also in this case consumer preferences were considered as fixed and not explained.

The concept of rationality has been criticized for instance by Ackerlof, who attributed the failure of rationality to the asymmetric information between the buyer and the seller; and by Herbert Simon, who criticized the generalization of rationality and raised the well known hypothesis of bounded rationality.

Raymond Boudon deserves a mention since he tried to overcome the problem of economic rationality by enlarging the concept up to the point where every action, as far as it can be motivated by the consumer, is rational in some sense. Nisbett and Rossa showed that consumers formulate optimal strategies but they fail (doing errors) in their implementations. Hammond, anticipating Kanheman, proposed the theory of cognitive continuity, which distinguished between an analytical (logical and mathematical) thought and an intuitive one (linked to perception, emotions and so on).

All these attempts to overcome the problem of economic rationality rely on and individual and often psychologistic framework, where the problem of the relationship between the social structure and rationality is left aside.

I've already spoken about Keyenes, Leibenstein and Duesemberry. I'll just say that they are economists who have tried to approach sociology, but often it was an old sociology, mainly that one of Veblen and Simmel. Through this approach they have tried to introduce new elements in the classical demand theory. Keyenes was aware that the consumer behavior has subjective elements, but he considered them as given, while the propensity to consume is determined by objective factors. According to Fabris (1971) Duesenberry's model is too generic and does not consider the characteristics of every single goods, so it can not be applied to every consumer choice. The main critique to Leibenstein (1950) is that he performed a static analysis.

Other economists (besides Friedman and Modigliani) who integrated the theory of consumption are Fishbein, Becker and Lancaster. The first formulated the expectancy-value theory, according to which the consumer attaches importance to each of the distinctive characteristics of the product. This model has been empirically refuted, in particular with regard to the objectivity of these characteristics. Moreover Fishbein theorized the rational consumer, but instead of evaluating the utility, his consumer evaluates the

distinctive characteristics that interest him.
Lancaster is very close to Fishbein as the characteristics of the product also play a decisive role in his theory. He reaches the conclusion that consumption choices are inefficient when they are made by multiple individuals and his model has been criticized because such characteristics are not objective and measurable but depend on the opinions and evaluations of other individuals.
Instead, Becker has tried to translate into the rational abstraction scheme of economics many forms of "irrationality" such as addictions or the different values attributed to time by consumers. In his work there are elements of a fetishistic translation by analogy, in my opinion. Bourdieu's criticism is interesting in this regard. He writes, speaking of the barely masked projection of the "personal experience" of the researcher in his research: *"economists have become experts in the art of formalizing a "lived" or a class unconscious. And it's hard to resist the perverse pleasure of remembering that study in which Gary S. Becker, who managed to better place his modelling imagination, tries to explain the paradox that the demand for certain goods increases with the experience of them (*De gustibus non est disputandum*, American Economic Review). To explain dispositions such as beneficial mania (melomania), or malefic mania (drug addictions) he appeals, in one case, to the reduction of the production cost of musical pleasure caused by the accumulation of specific human capital, on the other hand, to the increase in the cost of production of euphoria caused by the weakening of the ability to euphorize.* Quod erat demostrandum.".
Other concepts that entered economic consumption theories in recent years are: the complementarity between goods related to the social and psychological aspects of the lifestyle (besides the standard complementarity related to the use value of goods). The informative mechanism that pushes consumers to imitate those consumers more informed than them. The social pressure of conformism exercised by a reference group. The network externalities that in specific circumstances increase the benefit of behaving as the others do. The fashion world as a "club good": the influencer followers dynamic and the trickling down of tastes.
The present paper shows that there are still great theoretical differences inside the economist community in explaining demand. The argument that economics is interested only in the quantitative aspects of demand, leaving aside the reasons of consumer's choices is old and fails as far as the quantity consumed are influenced by the quality of the meaning, the *Vorstellung* to say it with Schopenhauer. We shall admit the great difficulties of enclosing preference interdependence in the analysis of demand formation; for two reasons, a technical and an ideological one. The technical one concerns the difficulty raised by the preference interdependence of obtaining aggregate demand as the sum of individual ones (Drakopoulos (2012)). The ideological instead is that admitting the social nature of consumer choices challenge the consumer's sovereignty, a cornerstone of liberal ideals. Gerardo Ragone (GERARDO (1995)) argued that many economists recognize the need to overcome the theory of rational choice to simulate demand, but actually a real alternative has not been produced. I would like to make a consideration related to the inclusion of preferences interdependencies in economic theory. The inclusion of the interdependence of preferences in a formal theory is difficult because preferences are interdependent not only in the quantitative sense: my consumption (satisfaction) depends on that of the individuals with whom I confront. But also in a qualitative sense: the value-sign/meaning/representation of a certain good/service depends on the sign value of all the others, that is there is an aspect similar to the structural aspect of the language in Saussure. Moreover, as the most recent semiotic and sociosemiotic theories argue, the meaning/representation depends on both the speaker and the receiver as well as on the cultural context in the broad sense; such as the culture of the nation, the region, the historical period, of the group and so on.

This section examined a wide range of contributions to consumption theory in order to argue in favour of an holistic approach to consumption, since none of this integration is exhaustive in the end; and maybe the issue of consumption is non-exhaustible. This paper can be considered an empirical proof that there exist two strands in consumption theories among economists' scientific publications, having different consequences both in fiscal (Drakopoulos (2021a), Samuelson (2004), Aronsson and Johansson-Stenman (2008)) and environmental terms (Howarth (2006), Venkatachalam (2008)). About the pure fiscal consequences I already wrote in section 2; about environmental policy implication instead: *"Accounting for relative consumption effects reduces the perceived social benefits of consumption, thus increasing social willingness to pay for environmental quality while reducing both the costs of tax interaction effects and the benefits of efficient revenue recycling. Taken together, these factors support the implementation of comparatively high environmental taxes in the face of relative consumption effects."* Howarth (2006). This is why I argue that the way consumption is theorized by economics is not a marginal issue. This work enters the debate by providing a linguistic based analysis that confirms actually the existence of two different ways (whatever you want to call them) of writing about consumption; ways corresponding to different theoretical frameworks. Indeed the policy advice concerns the importance of a debate among economists on the reasons for consumption choice; in short, on the qualitative nature of the preferences. Since the issue has important political implications.

This work have limited explanatory power about the approach to consumption of economics as a whole, I could just say something about the journals I analyzed, which are, even if not representative of the discipline, at least important leaders in some of its branches.

# Appendix A

# Tools

## A.1 Log Dice and Keyness scores

I firstly clarify the definition of *collocation*: *"each word sketch item is a triple consisting of the headword, the grammatical relation and the collocate. As such a word sketch is basically a dependency syntax graph, calculated using a hybrid rule-based and statistical approach"* Jakubıcek and Rychl (2019). A collocation is composed by a node and a collocate (e.g. in "*nice house*", *house* is the node and *nice* the collocate): the collocations are sorted according to their strength (following the insight that typicality score is more important than frequency, Curran (2004)), for instance "nice house" is not a strong collocation, since the word *house* and *nice* usually combine with many other words. This typicality score is based on the LogDice (Rychlý, P. (2008)). The latter is the evolution of the association score after eliminating the scale dependency (e.g. the fact that the absolute frequency of a collocation influenced a lot the strength of the latter). The LogDice formula is:

$$LogDice = 14 + log_2 \frac{2 * ||w_1.R.w_2||}{||w_1.R.*|| + ||*.*, w_2||} \tag{A.1.1}$$

*Dice* is a coefficient used in the formula in the pdf here below, created to eliminate the scale dependency of the previously used coefficient. For more insights about the LogDice score see `https://www.sketchengine.eu/wp-content/uploads/ske-statistics.pdf`.
Through the word sketch function is possible to study the word's (or lemmas) clusters. If the clustering option is selected then the similar words from the thesaurus are clustered according to their distributional similarity scores. This score is based on the idea that if two words share a similar collocation than they are used interchangeably in the corpus; this does not mean that they are synonymous in terms of meaning (semantically), but syntactically used in similar ways. Unfortunately the distributional similarity score works better with large corpora (more than 10 milions tokens), so I rarely used it. For more insights about this score see `https://www.sketchengine.eu/documentation/clustering-neighbours-documentation/`.
The collocations' analysis is performed by two additional functions of Sketch Engine: 1) Word sketch differences, which allows for a direct comparison between two subcorpora, or two lemmas in the same corpus. It is different from the simple word sketch because it provides insightful information about the use of a given lemma (or a cluster of lemmas if it is used together with the clustering algorithm) in two different subcorpora with a direct comparison (providing both numerical and graphical results). Or it may provide insightful results about the use of two semantically similar lemmas but with different forms.
For the sake of completeness, the possible direct comparison are: between two different lemmas in the same corpus, between two different word forms of the same lemma, or the same lemma used in two different subcorpora. In order to perform this direct comparison I merged the two corpora and then defined two

subcorpora according to the "heterodox/orthodox" categorization.
2) The concordance function displays examples of use in context (KWIC) of a given lemma in your focus corpus and/or in the reference one. This function has the great advantage of allowing the researcher for controlling and interpreting the empirical results. For instance the concordance resolves ambiguity on the negative or positive formulation of the sentence to which a collocation or lemma refers. In my case the occurrences of the lemma *neoclassical* must be semantically contextualized and defined for each of its occurencies.
There a lot of different ways of displaying the results with the concordance and an handful of statistical measures that can be used in to analyze the collocation even inside the concordance tool. For more informations see https://www.sketchengine.eu/guide/glossary/?cat=statistics.
The tag set I used is the predefined one in Sketch engine. POS (part of speech) tag is a "label" assigned to each token in a corpus. This label indicates the parts of speech (lexical categories) the token belongs to, and often also the tense, the number and/or the case.
The Keyness score is computed accoridng to the following formula:

$$KeynessScore = \frac{f_{pm_{rmfocus}} + N}{f_{pm_{rmref}} + N} \tag{A.1.2}$$

The numerator is the is the normalized (per million) frequency of the word in the focus corpus and the denominator is the normalized (per million) frequency of the word in the reference corpus. $N$ is a smoothing parameter ($N = 1$ is the default value).

# Bibliography


Acerbi, Alberto, Stefano Ghirlanda, and Magnus Enquist (2012). "The logic of fashion cycles". In: *PloS one* 7(3), e32541.

Aldridge, Alan (2003). *Consumption*. Polity.

Allende, Ana et al. (2008). "Role of commercial sanitizers and washing systems on epiphytic microorganisms and sensory quality of fresh-cut escarole and lettuce". In: *Postharvest Biology and Technology* 49(1), pp. 155–163.

Alpizar, Francisco, Fredrik Carlsson, and Olof Johansson-Stenman (2005). "How much do we care about absolute versus relative income and consumption?" In: *Journal of Economic Behavior & Organization* 56(3), pp. 405–421.

Appadurai, Arjun (1988). *The social life of things: Commodities in cultural perspective*. Cambridge University Press.

Arnold, Dennis and Kevin Hewison (2005). "Exploitation in global supply chains: Burmese workers in Mae Sot". In: *Journal of Contemporary Asia* 35(3), pp. 319–340.

Arnould, Eric J and Craig J Thompson (2005). "Consumer culture theory (CCT): Twenty years of research". In: *Journal of consumer research* 31(4), pp. 868–882.

Aronsson, Thomas and Olof Johansson-Stenman (2008). "When the Joneses' consumption hurts: Optimal public good provision and nonlinear income taxation". In: *Journal of Public Economics* 92(5-6), pp. 986–997.

Bagliano, Fabio-Cesare and Giuseppe Bertola (2004). *Models for dynamic macroeconomics*. OUP Oxford.

Ball, Laurence and David Romer (1990). "Real rigidities and the non-neutrality of money". In: *The Review of Economic Studies* 57(2), pp. 183–203.

Banuri, Sheheryar and Ha Nguyen (2020). "Borrowing to Keep Up (with the Joneses): Inequality, Debt, and Conspicuous Consumption". In: *Debt, and Conspicuous Consumption (September 30, 2020)*.

Bargigli, Leonardo et al. (2020). "Network calibration and metamodeling of a financial accelerator agent based model". In: *Journal of Economic Interaction and Coordination* 15(2), pp. 413–440.

Barrett, Brian D and Camille Anne Martina (2012). "Towards a non-deterministic reading of Pierre Bourdieu: Habitus and educational change in urban schools". In: *Policy Futures in Education* 10(3), pp. 249–262.

Barrington-Leigh, Christopher P (2008). "Veblen goods and neighbourhoods: endogenising consumption reference groups". In.

Baudrillard, Jean (1989). *America*. Verso.

Baudrillard, Jean (2016a). *Symbolic exchange and death*. Sage.

Baudrillard, Jean (2016b). *The consumer society: Myths and structures*. Sage.

Baudrillard, Jean and Pierre Dalla Vigna (2010). *Per una critica dell'economia politica del segno*. Mimesis.

Baumgartner, Hans (2010). "Bibliometric reflections on the history of consumer research". In: *Journal of Consumer Psychology* 20(3), pp. 233–238.

Bellet, Clément and Eve Colson-Sihra (2018). *The conspicuous consumption of the poor: Forgoing calories for aspirational goods*. Tech. rep. Working paper.

Bellezza, Silvia and Jonah Berger (2020). "Trickle-round signals: when low status is mixed with high". In: *Journal of Consumer Research* 47(1), pp. 100–127.

Bilancini, Ennio, Leonardo Boncinelli, et al. (2009). *Signalling, Social Status and Labor Income Taxes*. Tech. rep. Citeseer.

Bourdieu, Pierre (1987). *Distinction: A social critique of the judgement of taste*. Harvard university press.

Bourdieu, Pierre (2000). *Pascalian meditations*. Stanford University Press.

Bourdieu, Pierre (1989). "Social space and symbolic power". In: *Sociological theory* 7(1), pp. 14–25.

Bourdieu, Pierre (1993). *Sociology in question*. Vol. 18. Sage.

Bourdieu, Pierre (2018). *The forms of capital*. Routledge.

Bourdieu, Pierre, Jean-Claude Chamboredon, and Jean-Claude Passeron (2011). "The craft of sociology". In: *The Craft of Sociology*. de Gruyter.

Bourdieu, Pierre and Jean-Claude Passeron (2018). *La reproduction: éléments pour une théorie du système d'enseignement*. Minuit.

Bowles, Samuel, Herbert Gintis, et al. (2000). "Reciprocity, self-interest, and the welfare state". In: *Nordic Journal of Political Economy* 26(1), pp. 33–53.

Bricker, Jesse, Jacob Krimmel, and Rodney Ramcharan (2021). "Signaling status: The impact of relative income on household consumption and financial decisions". In: *Management Science* 67(4), pp. 1993–2009.

Bruner, Raisa (2018). "How rap became the sound of the mainstream". In: *Time. https://time.com/5118041/rap-music-mainstream*.

Caiani, Alessandro et al. (2016). "Economics with Heterogeneous Interacting Agents". In: *New Economic Windows, Springer Series. DOI* 10, pp. 978–3.

Chan, Anita (2016). *China's workers under assault: Exploitation and abuse in a globalizing economy*. Routledge.

Charles, Kerwin Kofi, Erik Hurst, and Nikolai Roussanov (2009). "Conspicuous consumption and race". In: *The Quarterly Journal of Economics* 124(2), pp. 425–467.

Chen, Wei-Fen and Michelle R Nelson (2020). "Champagne taste, beer budget: The new poor's incongruent capital and consumption". In: *Journal of Consumer Culture* 20(1), pp. 23–42.

Codeluppi, Vanni (1993). "La semiotica del consumo: nuovi sviluppi del pensiero di marketing". In.

Codeluppi, Vanni (2005). *Manuale di sociologia dei consumi*. Vol. 1. Carocci.

Corbin, Henry (2014). *History of Islamic philosophy*. routledge.

Corneo, Giacomo and Hans Peter Grüner (2002). "Individual preferences for political redistribution". In: *Journal of public Economics* 83(1), pp. 83–107.

Corneo, Giacomo and Olivier Jeanne (1997). "Conspicuous consumption, snobbism and conformism". In: *Journal of public economics* 66(1), pp. 55–71.

Curran, James Richard (2004). "From distributional to semantic similarity". In.

D'IPPOLITI, CARLO and Alessandro Roncaglia (2015). "Heterodox economics and the history of economic thought". In: *Advancing the Frontiers of Heterodox Economics*. Routledge, pp. 49–66.

D'Orlando, Fabio and Eleonora Sanfilippo (2010). "Behavioral foundations for the Keynesian consumption function". In: *Journal of Economic Psychology* 31(6), pp. 1035–1046.

Daniel, Kahneman (2017). *Thinking, fast and slow*.

Davis, John B (2010). *Individuals and identity in economics*. Cambridge University Press.

Di Giovinazzo, Viviana and Ahmad Naimzada (2015). "A model of fashion: Endogenous preferences in social interaction". In: *Economic Modelling* 47, pp. 12–17.

Douglas, Mary and Baron Isherwood (2021). *The world of goods*. Routledge.

Dow, Sheila (2012). *Foundations for new economic thinking: a collection of essays*. Springer.

Dowling, Samantha, Karen Moreton, and Leila Wright (2007). *Trafficking for the purposes of labour exploitation: a literature review*. Home Office London.

Drakopoulos, Stavros A (1992). "Keynes 'Economic Thought and the Theory of Consumer Behaviour". In: *Scottish Journal of Political Economy* 39(3), pp. 318–336.

Drakopoulos, Stavros A (2012). "The history of attitudes towards interdependent preferences". In: *Journal of the History of Economic Thought* 34(4), pp. 541–557.

Drakopoulos, Stavros A (2021a). "The marginalization of absolute and relative income hypotheses of consumption and the role of fiscal policy". In: *The European Journal of the History of Economic Thought*, pp. 1–20.

Drakopoulos, Stavros A (2021b). "Theories of Consumption". In.

Duesenberry, James S (1949). *Income, saving, and the theory of consumer behavior*.

Duflo, Esther and Abhijit Banerjee (2011). *Poor economics*. Vol. 619. PublicAffairs.

Easterlin, Richard A (1974). "Does economic growth improve the human lot? Some empirical evidence". In: *Nations and households in economic growth*. Elsevier, pp. 89–125.

Easterlin, Richard A (1995). "Will raising the incomes of all increase the happiness of all?" In: *Journal of Economic Behavior & Organization* 27(1), pp. 35–47.

Easterlin, Richard A et al. (2010). "The happiness–income paradox revisited". In: *Proceedings of the National Academy of Sciences* 107(52), pp. 22463–22468.

Eco, Umberto (2016). *Trattato di semiotica generale*. La Nave di Teseo Editore spa.

Elliott, Richard (1997). "Existential consumption and irrational desire". In: *European Journal of Marketing*.

Fafchamps, Marcel and Forhad Shilpi (2008). "Subjective welfare, isolation, and relative consumption". In: *Journal of Development Economics* 86(1), pp. 43–60.

Ferrari Filho, Fernando and Pedro Cezar Dutra Fonseca (2015). "Which developmentalism? A Keynesian–Institutionalist proposal". In: *Review of Keynesian Economics* 3(1), pp. 90–107.

Fisher, Irving (1930). *Theory of interest: as determined by impatience to spend income and opportunity to invest it*. Augustusm Kelly Publishers, Clifton.

Frank, Robert H (1985). *Choosing the right pond: Human behavior and the quest for status*. Oxford University Press.

Frank, Robert H (2005). "The mysterious disappearance of James Duesenberry". In: *New York Times* 9.

Fremling, Gertrud M and Richard A Posner (1999). "Market signaling of personal characteristics". In: *University of Chicago Law School, John M. Olin Law & Economics Working Paper*( 87).

Frey, Bruno S and Alois Stutzer (2002). "What can economists learn from happiness research?" In: *Journal of Economic literature* 40(2), pp. 402–435.

Friedland, Lewis et al. (2007). "Capital, consumption, communication, and citizenship: The social positioning of taste and civic culture in the United States". In: *The Annals of the American Academy of Political and Social Science* 611(1), pp. 31–50.

Friedman, Milton (1957a). “Front Matter” A Theory of the Consumption Function””. In: *A Theory of the Consumption Function*. Princeton University Press, pp. 20–.

Friedman, Milton (1957b). “The permanent income hypothesis”. In: *A theory of the consumption function*. Princeton University Press, pp. 20–37.

Galak, Jeff et al. (2016). “Trickle-down preferences: Preferential conformity to high status peers in fashion choices”. In: *PloS one* 11(5), e0153448.

GERARDO, RAGONE di (1995). “Prospettive di ricerca sociologica sui consumi”. In: *Rassegna italiana di sociologia* 36, p. 153.

Gil, Maria Isabel et al. (2016). “Should chlorate residues be of concern in fresh-cut salads?” In: *Food Control* 60, pp. 416–421.

Granovetter, Mark (1985). “Economic action and social structure: The problem of embeddedness”. In: *American journal of sociology* 91(3), pp. 481–510.

Granovetter, Mark S (1973). “The strength of weak ties”. In: *American journal of sociology* 78(6), pp. 1360–1380.

Gronow, Jukka and Alan Warde (2001). *Ordinary consumption*. Vol. 2. Psychology Press.

Guillen-Royo, Monica (2011). “Reference group consumption and the subjective wellbeing of the poor in Peru”. In: *Journal of Economic Psychology* 32(2), pp. 259–272.

Gupta, Vishal, Gurpreet S Lehal, et al. (2009). “A survey of text mining techniques and applications”. In: *Journal of emerging technologies in web intelligence* 1(1), pp. 60–76.

Hall, Robert E (1978). “Stochastic implications of the life cycle-permanent income hypothesis: theory and evidence”. In: *Journal of political economy* 86(6), pp. 971–987.

Hall, Stuart (2007). “Encoding and decoding in the television discourse”. In: *CCCS selected working papers*. Routledge, pp. 402–414.

Harriger, Jessica L (2010). *Conspicuous consumption and inequality: Theory and evidence*. State University of New York at Binghamton.

Hegel, Georg Wilhelm Friedrich (2010). “Encyclopaedia of the Philosophical Sciences in Basic Outline”. In.

Holt, Douglas B (1997a). “Distinction in America? Recovering Bourdieu’s theory of tastes from its critics”. In: *Poetics* 25(2-3), pp. 93–120.

Holt, Douglas B (1997b). “Poststructuralist lifestyle analysis: Conceptualizing the social patterning of consumption in postmodernity”. In: *Journal of Consumer research* 23(4), pp. 326–350.

Howarth, Richard B (2006). “Optimal environmental taxes under relative consumption effects”. In: *Ecological Economics* 58(1), pp. 209–219.

Jaikumar, Saravana and Ankur Sarin (2015). “Conspicuous consumption and income inequality in an emerging economy: evidence from India”. In: *Marketing Letters* 26(3), pp. 279–292.

Jakubıcek, Milos and Pavel Rychl (2019). “A Distributional Multi-word Thesaurus in Sketch Engine.” In: *RASLAN*, pp. 143–147.

Jappelli, Tullio and Luigi Pistaferri (2017). *The economics of consumption: theory and evidence*. Oxford University Press.

Jenkins, Richard (1982). “Pierre Bourdieu and the reproduction of determinism”. In: *Sociology* 16(2), pp. 270–281.

Johnson, Joseph, Gerard J Tellis, and Deborah J MacInnis (2005). “Losers, winners, and biased trades”. In: *Journal of Consumer Research* 32(2), pp. 324–329.

Johnstone, John and Elihu Katz (1957). “Youth and popular music: A study in the sociology of taste”. In: *American Journal of Sociology* 62(6), pp. 563–568.

Jung, Carl Gustav (1980). *Simboli della trasformazione: analisi dei problemi di un caso di schizofrenia*. Boringhieri.

Kahneman, Daniel and Amos Tversky (2013a). "Choices, values, and frames". In: *Handbook of the fundamentals of financial decision making: Part I*. World Scientific, pp. 269–278.

Kahneman, Daniel and Amos Tversky (2013b). "Prospect theory: An analysis of decision under risk". In: *Handbook of the fundamentals of financial decision making: Part I*. World Scientific, pp. 99–127.

Kaluža, Jernej (2018). "Reality of Trap: Trap music and its emancipatory potential". In: *IAFOR Journal of Media, Communication & Film* 5(1), pp. 23–42.

Kapteyn, Arie and Floor G Van Herwaarden (1980). "Interdependent welfare functions and optimal income distribution". In: *Journal of Public Economics* 14(3), pp. 375–397.

Kaus, Wolfhard (2013). "Conspicuous consumption and "race": Evidence from South Africa". In: *Journal of Development Economics* 100(1), pp. 63–73.

Keynes, John Maynard (2018). "The General Theory". In: *The General Theory of Employment, Interest, and Money*. Springer, pp. 3–3.

Kilgarriff, Adam (2012). "Getting to know your corpus". In: *International conference on text, speech and dialogue*. Springer, pp. 3–15.

Kilgarriff, Adam (2009). "Simple maths for keywords". In: *Proc. Corpus Linguistics*.

Kilgarriff, Adam et al. (2014). "The Sketch Engine: ten years on". In: *Lexicography* 1(1), pp. 7–36.

King, Anthony (2000). "Thinking with Bourdieu against Bourdieu: A 'practical'critique of the habitus". In: *Sociological theory* 18(3), pp. 417–433.

Kuhnen, Camelia M and Brian Knutson (2005). "The neural basis of financial risk taking". In: *Neuron* 47(5), pp. 763–770.

Kuznets, Simon (1946). "Introduction to" National Income: A Summary of Findings"". In: *National Income: A Summary of Findings*. NBER, pp. 1–2.

Lavoie, Don (1994). "The interpretive turn". In: *The Elgar companion to Austrian economics*. Edward Elgar Publishing.

Lawson, Tony (1988). "Probability and uncertainty in economic analysis". In: *Journal of post Keynesian economics* 11(1), pp. 38–65.

Lee, Frederic S et al. (2010). "Research quality rankings of heterodox economic journals in a contested discipline". In: *American Journal of Economics and Sociology* 69(5), pp. 1409–1452.

Leibenstein, Harvey (1950). "Bandwagon, snob, and Veblen effects in the theory of consumers' demand". In: *The quarterly journal of economics* 64(2), pp. 183–207.

Lejoyeux, Michel and Aviv Weinstein (2010). "Compulsive buying". In: *The American Journal of Drug and Alcohol Abuse* 36(5), pp. 248–253.

Lewin, Shira B (1996). "Economics and psychology: Lessons for our own day from the early twentieth century". In: *Journal of economic literature* 34(3), pp. 1293–1323.

Lipovetsky, Gilles (2002). *Empire de L'éphémère*. Princeton University Press.

Lizardo, Omar (2004). "The cognitive origins of Bourdieu's habitus". In: *Journal for the theory of social behaviour* 34(4), pp. 375–401.

Luttmer, Erzo FP (2005). "Neighbors as negatives: Relative earnings and well-being". In: *The Quarterly journal of economics* 120(3), pp. 963–1002.

Maffesoli, Michel (1996). *The contemplation of the world: Figures of community style*. U of Minnesota Press.

Martens, Lydia and Emma Casey (2016). *Gender and consumption: Domestic cultures and the commercialisation of everyday life*. Routledge.

Marx, Karl (2018). *Capital volume 1*. Lulu. com.

Mason, Roger (2000a). "Conspicuous consumption and the positional economy: Policy and prescription since 1970". In: *Managerial and Decision Economics* 21(3-4), pp. 123–132.

Mason, Roger (2000b). "The social significance of consumption: James Duesenberry's contribution to consumer theory". In: *Journal of Economic Issues* 34(3), pp. 553–572.

Mason, Roger S (2000). "A pathfinding study of consumption". In: *Journal of Macromarketing* 20(2), pp. 174–177.

Matsuyama, Kiminori (1991). *Custom versus fashion: Path-dependence and limit cycles in a random matching game*. Tech. rep. Discussion paper.

Mazzocco, Philip J et al. (2012). "Direct and vicarious conspicuous consumption: Identification with low-status groups increases the desire for high-status goods". In: *Journal of Consumer Psychology* 22(4), pp. 520–528.

McCracken, Grant (1986). "Culture and consumption: A theoretical account of the structure and movement of the cultural meaning of consumer goods". In: *Journal of consumer research* 13(1), pp. 71–84.

McCracken, Grant David (1990). *Culture and consumption: New approaches to the symbolic character of consumer goods and activities*. Vol. 1. Indiana University Press.

Minsky, Hyman P (1976). *John maynard keynes*. Springer.

Moav, Omer and Zvika Neeman (2010). "Status and poverty". In: *Journal of the European Economic Association* 8(2-3), pp. 413–420.

Moav and, Omer and Zvika Neeman (2012). "Saving rates and poverty: The role of conspicuous consumption and human capital". In: *The Economic Journal* 122(563), pp. 933–956.

Modigliani, Franco and Richard Brumberg (1954). "Utility analysis and the consumption function: An interpretation of cross-section data". In: *Franco Modigliani* 1(1), pp. 388–436.

Murphy, John L (2018). "Measuring Conspicuous Consumption". In: *Available at SSRN 3309304*.

Ollivier, Michèle (2008). "Modes of openness to cultural diversity: Humanist, populist, practical, and indifferent". In: *poetics* 36(2-3), pp. 120–147.

Ordabayeva, Nailya and Pierre Chandon (2011). "Getting ahead of the Joneses: When equality increases conspicuous consumption among bottom-tier consumers". In: *Journal of Consumer Research* 38(1), pp. 27–41.

Oswald, Andrew J (1997). "Happiness and economic performance". In: *The economic journal* 107(445), pp. 1815–1831.

Paltrinieri, Roberta (1998). *Il consumo come linguaggio*. Vol. 3. FrancoAngeli.

Pesendorfer, Wolfgang (1995). "Design innovation and fashion cycles". In: *The american economic review*, pp. 771–792.

Peters, Gabriel (2014). "Explanation, understanding and determinism in Pierre Bourdieu's sociology". In: *History of the Human Sciences* 27(1), pp. 124–149.

Peterson, Richard A (1992). "Understanding audience segmentation: From elite and mass to omnivore and univore". In: *Poetics* 21(4), pp. 243–258.

Podoshen, Jeffrey S, Susan A Andrzejewski, and James M Hunt (2014). "Materialism, conspicuous consumption, and American hip-hop subculture". In: *Journal of International Consumer Marketing* 26(4), pp. 271–283.

Postlewaite, Andrew (1998). "The social basis of interdependent preferences". In: *European economic review* 42(3-5), pp. 779–800.

Rabin, Matthew (2002). "A perspective on psychology and economics". In: *European economic review* 46(4-5), pp. 657–685.

Reimer, Suzanne and Deborah Leslie (2004). "Identity, consumption, and the home". In: *Home Cultures* 1(2), pp. 187–210.

Samuelson, Larry (2004). "Information-based relative consumption effects". In: *Econometrica* 72(1), pp. 93–118.

Schor, Juliet B (2007). "In defense of consumer critique: Revisiting the consumption debates of the twentieth century". In: *The Annals of the American Academy of Political and Social Science* 611(1), pp. 16–30.

Semprini, Andrea (1996). "Analyser la communication: comment analyser les images, les médias, la publicité". In: *Analyser la communication*, pp. 1–270.

Sen, Amartya (2005). "Why exactly is commitment important for rationality?" In: *Economics & Philosophy* 21(1), pp. 5–14.

Shove, Elizabeth and Alan Warde (2002). "Inconspicuous consumption: the sociology of consumption, lifestyles and the environment". In: *Sociological theory and the environment: classical foundations, contemporary insights* 230(51), pp. 230–251.

Silverstone, Roger (2003). *Television and everyday life*. Routledge.

Silverstone, Roger (2000). *Televisione e vita quotidiana*. Il mulino.

Simmel, Georg (1957). "Fashion". In: *American journal of sociology* 62(6), pp. 541–558.

Sokal, Alan and Jean Bricmont (1997). *Impostures intellectuelles*. Odile Jacob.

Solomon, Michael R and Henry Assael (1987). "The forest or the trees? A gestalt approach to symbolic consumption". In: *Marketing and semiotics: New directions in the study of signs for sale*, pp. 189–218.

Stapleton, Katina R (1998). "From the margins to mainstream: the political power of hip-hop". In: *Media, culture & society* 20(2), pp. 219–234.

Stevens, Anthony (2002). *Il filo di Arianna: una guida ai simboli dell'umanità*. Corbaccio.

Stewart, Steven A and Robert C Hoell (2016). "Hire someone like me, or hire someone I need: Entrepreneur identity and early-stage hiring in small firms". In: *Journal of Small Business & Entrepreneurship* 28(3), pp. 187–201.

Sundie, Jill M et al. (2011). "Peacocks, Porsches, and Thorstein Veblen: Conspicuous consumption as a sexual signaling system." In: *Journal of personality and social psychology* 100(4), p. 664.

Tassier, Troy (2004). "A model of fads, fashions, and group formation". In: *Complexity* 9(5), pp. 51–61.

Thornton, Mark (1995). "Alcohol consumption and the standard of living in antebellum America". In: *Atlantic Economic Journal* 23(2), pp. 156–157.

Todorova, Zdravka (2014). "Consumption as a social process". In: *Journal of Economic Issues* 48(3), pp. 663–678.

Trentmann, Frank (2012). *The Oxford handbook of the history of consumption*. Oxford University Press on Demand.

Trezzini, Attilio (2016). "Early contributions to the economics of consumption as a social phenomenon". In: *The European Journal of the History of Economic Thought* 23(2), pp. 272–296.

Trezzini, Attilio (2012). "Relative income vs. permanent income: The crisis of the theory of the social significance of consumption". In: *Journal of the History of Economic Thought* 34(3), pp. 355–377.

Trezzini, Attilio (2011). "The irreversibility of consumption as a source of endogenous demand-driven economic growth". In: *Review of Political Economy* 23(4), pp. 537–556.

Trigg, Andrew B (2001). "Veblen, Bourdieu, and conspicuous consumption". In: *Journal of economic issues* 35(1), pp. 99–115.

Trizzulla, Caterina, Renaud Garcia-Bardidia, and Eric Rémy (2016). "From Bourdieu to Lahire: Social determinism and pluralist consumer practices". In: *Recherche et Applications en Marketing (English Edition)* 31(1), pp. 85–102.

Truyts, Tom (2010). "Social status in economic theory". In: *Journal of Economic Surveys* 24(1), pp. 137–169.

Tversky, Amos and Craig R Fox (1995). "Weighing risk and uncertainty." In: *Psychological review* 102(2), p. 269.

Van Kempen, Luuk (2003). "Fooling the eye of the beholder: deceptive status signalling among the poor in developing countries". In: *Journal of International Development: The Journal of the Development Studies Association* 15(2), pp. 157–177.

Van Kempen, Luuk (2007). "Status consumption and ethnicity in Bolivia: Evidence from durables ownership". In: *International Journal of Consumer Studies* 31(1), pp. 76–89.

Veblen, Thorstein and C Wright Mills (2017). *The theory of the leisure class.* Routledge.

Venkatachalam, L (2008). "Behavioral economics for environmental policy". In: *Ecological economics* 67(4), pp. 640–645.

Warde, Alan (2015). "The sociology of consumption: Its recent development". In: *Annual Review of Sociology* 41, pp. 117–134.

Wisman, Jon D (2009). "Household saving, class identity, and conspicuous consumption". In: *Journal of Economic Issues* 43(1), pp. 89–114.