

Towards a New Economic Model Valuing Women and Natural Resources

Decomposing Orthodox Economics by De-
Growth and Feminist Economic Theory

Anita Sammarini

IYTT WORKING PAPER No. 4
MAY 2023

in connection with IYTT's
INTERNATIONAL YOUTH CONFERENCE 2022

Towards a New Economic Model Valuing Women and Natural Resources

Decomposing Orthodox Economics by De- Growth and Feminist Economic Theory

Anita Sammarini

IYTT WORKING PAPER No. 4
MAY 2023

in connection with IYTT's
INTERNATIONAL YOUTH CONFERENCE 2022

The **IYTT** is a transnational organization that mobilize youth from diverse backgrounds with the aim of inspiring decision makers to renew democracy and people to active citizenships. Activities center around annual youth conferences in which participants develop and present policy proposals for strengthening an open and democratic society, while being brought together variously with executives from industry, academia, culture, politics, and civil society. Participants publish their proposals in reports and in The Handbook for Innovative Democracy, and engaged afterwards as Youth Fellows, develop them further into working papers and policy briefs through the "IYTT Bottom-Up Policy Advice Loop", a method involving open deliberations with decision-makers, scholars, peers in the IYTT European Youth Panel, and laypersons.

Towards a New Economic Model Valuing Women and Natural Resources: Decomposing Orthodox Economics by De-Growth and Feminist Economic Theory

Anita Sammarini

ABSTRACT

The economic growth model has been dominating political and economic life for decades, leveraging on the expectation that a sustained economic growth is possible and leading instead to the careless exploitation of the environment, and the devaluation of female's reproductive and care work. If progress and prosperity are measured only in terms of a percentage increase in Gross Domestic Product and GDP structurally excludes unpaid labor and externalizes environmental impacts, what we are labeling as "growth" is misconceiving and mismeasuring economic activity while not accounting at all for the population's well-being. Such an economic growth conception is also suppressing the valorization of unmonetized services or goods which are useful to society, or that intrinsically enable its development and progress. In this context, a feminist degrowth critique is instrumental to an emancipatory understanding of the structural carelessness of the hegemonic economic growth model. The integration of feminist perspectives is therefore a necessary precondition to succeed in formulating a view that puts the reproductive economy of care and sustainability at the center of a new economic model. Whether and how a new economic model founded on de-growth and feminist economic theory can be enacted as a radical change in our economies and societies, remains rather controversial. Within such an intricate debate, the aim of this work is to shed light on how a reconceptualization of the economy which distances itself from GDP-based measurements of progress, can contribute to the feminist cause and a sustainable future.

KEYWORDS

Degrowth economic theory – Feminist economics – Sustainability – Unpaid labor

CONTACT

Anita Sammarini, anita.sam29@gmail.com

The views expressed in this paper are those of the author and do not necessarily reflect the views of the IYTT.

CONTENTS

Introduction	2
1. Degrowth	6
2. Degrowth and feminist economics: reconceiving unpaid work	17
3. Feminist Growth Critique	23
Conclusion	28
About the author	29
Bibliography	30

Introduction

Society is undergoing a multi-dimensional crisis that entails the deterioration of democracy, inequality, and ruthless environmental degradation. Such crises are passively being accepted as if dictated by some predetermined fate. But inequality is a political choice, not an inevitable fatality. Currently the richest 10% of the global population is the recipient of 52% of global income, while the poorest half of the population only earns 8.5%. Talking numbers, an individual who belongs to the top 10% of the global income distribution earns €87,200 per year, while an individual from the poorest half instead earns €2,800. Global wealth inequalities are even more pronounced than income inequalities as the poorest half of the global population barely owns any wealth at all, possessing just 2% of the total, and the richest 10% own 76% of total wealth. Inequality is not homogeneously distributed among the globe and varies significantly between the most equal region (Europe) and the most unequal (Middle East and North Africa i.e. MENA): in Europe, the top 10%'s income share is around 36%, and in MENA it reaches 58%. In addition to these two extremes, in the middle we find East Asia, where the top 10% makes 43% of total income and Latin America where the richest earn 55%.

Environmental degradation is an economic consequence as inequality walks beside us breathing our graciously toxic air: at the beginning of 2023 CO₂ parts per million were at 418. The last time carbon dioxide levels on the planet were that high was 4 million years ago. Global temperature has risen 1.15° Celsius above pre-industrial levels as we're using more of the Earth's resources than it can replenish naturally, flood the ocean with 14 million tons of plastic and pollute the air we breathe.

In the political scenario, as the International Institute for Democracy and Electoral Assistance (IDEA) affirms, democracy's strength is at stake as leaders face challenges like Russia's war in Ukraine, the cost-of-living crisis, global recession, and climate change. The number of countries shifting towards authoritarianism is more than double the number of countries moving towards democracy. Such an erosion of democratic government is worsened by restrictions on freedom of expression and threats to other civil rights, political polarization, institutional disfunction and distrust in democratic elections. No progress is observable when looking at the Global State of Democracy (GSoD) Indices over the last few years. What should greatly concern us is that by the end of 2021, half of the 173 countries assessed by IDEA were found to be worse in at least one sub-attribute of democracy. An alarming statistic shows that in Europe, half of all democracies have weakened over the last few years and over the world, half of authoritarian regimes have instead gotten worse.

The economy is suffocating under the pressure of war in Ukraine, which has triggered a massive shock to the global economy, most relevantly to energy and food markets, pushing up prices to unprecedented levels. The euro-area has been mostly impacted due to its strong

dependence on energy imports and given that Russia had always been a key energy supplier. European economies are succumbing to the pressure of inflation which has increased from 0.3% in 2020 to 2.6% in 2021, to a massive 8.4% in 2022.

The case for fundamental change is thus underscored by the emergence of crises in four different areas. An *economic crisis* induced some years ago by the Great Recession, that precipitated in the United States in 2008 and quickly spread in other countries plunging many workers into poverty and despair. More recently, the economic crisis induced by the disruption of geopolitical balance in Europe. A *social crisis* of growing social and economic inequality. A strict minority is the recipient of soaring incomes and accumulated wealth while salaries are stagnant, and poverty is widespread. We are witnessing a disturbing decline in social mobility, poor health insurance coverage in some parts of the world, prison overcrowding, systemic racism, and a scarce handling of migratory flows.

Moreover, excessive human consumption, , has led to an urgent *environmental crisis* which is disrupting Earth's climate and reducing its capability to support life. Finally, a *political crisis* is reflected in governmental paralysis, populism, political polarization, and a weakened and fragile democracy. This has caused various authoritarian regimes to emerge in face of a hesitant and corrupt democracy that is the best democracy that money can buy.

The hegemonic economic growth model is one of the ground causes for these crises. Taking the Great Recession as an example, it is possible to outline how the same growth model, is responsible for such a situation. In fact, what escalated in such a tragic outcome was nothing, but the result of the deliberate policy choices intended to maintain growth of deregulation of the financial industry and supply of easy money (Jackson, 2009). Decisions related to money supply were handed out to markets and independent bodies, moving them away from the realm of democratic choice. This hegemonic economic growth model is also responsible for the perpetuation of a deeply patriarchal system that obscures and renders invisible women's work for society. Growth, seen as sheer accumulation of wealth, monetizable prosperity and eager progress towards enhanced production, is suppressing the valorization of unmonetized services or goods which are useful to society, or that intrinsically enable its development and progress. Central to this narrative is the exploitation of female-codified reproductive labor as non-productive "outside" as defined by Rosa Luxembourgh and Silvia Federici. A feminist critique to the economy of growth is instrumental to an emancipatory understanding of degrowth to account for the "structural carelessness of capitalism" (Aulenbacher, Dammayr and Décieux, 2015).

The tendency for capitalist economies to grow is one of their most characteristic properties, successful capitalist countries are easily identifiable as those who have experienced sustained per capita growth for decades. In this context, capitalism refers to an economic system

dominated by production that employs wage labor in which the means of production belong to the employer. Central to this economic system is thus the notion of productivity which intrinsically determines growth and relies on an acquired abundance, achieved through enhanced productivity. An economic system based on the private ownership of the means of production and their operation for profit will inevitably generate a growth imperative, a race to an ever-increasing, perpetually redefinable *more*. As businesses and enterprises strive to increase their profits, producing and thus selling more goods and services, economic growth is achieved and higher levels of employment, income and prosperity are reached. In a capitalist system, the principle of compound interest requires investment returns to be reinvested to gain further returns, leading to a cycle for ever-increasing growth. Businesses that are not able to keep up with this growth path are predicted to fall behind competitors and fail altogether.

The growth-model has been dominating political and economic life for decades, leveraging on the expectation that a sustained growth is possible and capitalizing on a hypothetical win-win mechanism that relies on efficiency gains through technological advancements. These efficiency gains have not been obtained from neither a social nor an economic standpoint and it is safe to state that the perpetual prioritization of economic growth and certain economic values are at the root of the systemic failures and crises that society is experiencing.

Orthodox economics' definition of growth is economic growth, the quantitative increase in output in an economy measured by an increase in real Gross Domestic Product over a period. As the hegemony of GDP accounting as sole indicator of prosperity and progress has come to the expense of numerous societal needs, the fixation on growth and productivity is responsible for the depletion of limited resources; even though environmental concerns have recently been introduced to the debate, they are always subordinate to the growth imperative. Individuals' welfare, well-being and mental health are secondary indicators in an economic model that does not value them in the conceptualization of progress and prosperity, and the recent pervasive welfare crisis is just considered white noise in a bigger system.

Orthodox growth theories have been developed and scrutinized thoroughly in mainstream economics, in this paper I will not proceed to an attentive analysis and critique of such theories but rather I will provide a critique of the orthodox economic model of growth from a broader, conceptual perspective. Specifically, this paper aims at providing a feminist critique to growth rooted in heterodox economics. In the following sections I will often refer to orthodox, mainstream neoclassical economics, and heterodox economics: a brief description to distinguish the two is necessary. Most concisely, and absolutely not exhaustively, it is safe to state that orthodox theories describe economic states of the world through sophisticated

models starring individuals as rational economic agents who take decisions by maximizing optimally their utility in markets moved by an *invisible hand*. Mainstream economics follows rational choice theory according to which individuals are fully rational and take decisions exploiting all available information mathematically maximizing a utility function. Schools of thought outside the mainstream, orthodox theories, called heterodox economic theories, are skeptical of the conceptualization of a purely egotistic rational agent, and of the market's self-adjustment mechanism implied by orthodox theories as there is no space for moral concerns or altruism. Heterodox theories include heterogeneity in models and contest the idea of equilibrium as theorized in mainstream models.

This paper wants to discuss how careless disruption of the environment we live in, and the devaluation and exploitation of female's reproductive and care work, are not sustainable and haven't ever been sustainable from both a social, economic, and ecological point of view. Degrowth theory is here presented in its various definitions, summarizing main contributions to literature on such a topic and providing, more precisely, a feminist view on degrowth. The main purpose of this work is to present a draft for a new economic model that values women's labor and the ecological setting that we inhabit by combining and integrating a variety of theories on degrowth and building on feminist economics. Crucially, feminist degrowth is rooted in a politicization of the economy that decouples prosperity and economic value. This work will analyze unpaid care-work's function in a reconceived society and how this correlates, or rather acts as a bonding link between degrowth and feminist economic theories.

The rest of the paper is structured as follows. Section 2 provides insights on degrowth theory in most general terms, then focusing on specific definitions of degrowth. Namely, a discussion is provided for the conceptualization of sustainable degrowth, population degrowth and radical degrowth. Section 3 describes the core aim of this paper by presenting feminist contributions to heterodox economics, and Section 4 outlines feminist critique to growth.

1. Degrowth

The *Degrowth Declaration of the Paris 2008 conference* reads

the process of degrowth is characterized by: an emphasis on quality of life rather than quantity of consumption; the fulfilment of basic human needs for all; societal change based on a range of diverse individual and collective actions and policies; substantially reduced dependence on economic activity, and an increase in free time, unremunerated activity, conviviality, sense of community, and individual and collective health; encouragement of self-reflection, balance, creativity, flexibility, diversity, good citizenship, generosity, and non-materialism; observation of the principles of equity, participatory democracy, respect for human rights, and respect for cultural differences.

Degrowth is a social and economic movement born from the shared criticism of an ever-growing, ever-consuming, ever-producing society. Degrowth considers growth neither necessary nor desirable, denounces as oxymoron the concept of a sustainable development and calls for a society where wellbeing no longer depends on material wealth and instead originates from equality and sufficiency. Taking inspiration from Duverger's definition, degrowth is a concept platform shaped by sources of thought on four different levels:

1. The ecological level – affirming the priority of the ecosystem and of natural resources.
2. The bio economical level – which accepts and considers the limits of economic growth.
3. The democratic level – which re-legitimizes public debate.
4. The spiritual level – refers to the crisis of meaning in modern societies.

The term *décroissance* first appeared in the French translation of Georgescu-Roegen's (1971) seminal work *The Entropy Law and the economic process*. It has since been analyzed and discussed thoroughly in the academic debate, some of its most prominent advocates includes Latouche, Ariès, Cheney and Schneider. Georgescu-Roegen (1971) introduced the notion of degrowth in response to what he defined as the irreversible damage inflicted by politics of endless growth defended by neo-liberal economics. He extensively described a new view of economic process by referring to the laws of entropy and thermodynamics. The word then appeared in 1972 during a debate organized by *The Nouvel Observateur*, when André Gorz, while examining the relation between growth and capitalism, asked the following question: "Is global balance, which is conditional upon non-growth – or even degrowth – of material production, compatible with the survival of the (economic) system?". In 1979 the economist Nicholas Georgescu-Roegen published *Demain la décroissance*, the first book to have the word degrowth on its cover containing a collection of texts of the author and his renown economic

theory based on the law of entropy. *Décroissance* became an activist slogan in France in 2001, in Italy in 2004 *Decrescita* and in Catalonia and Spain in 2006 (as *Decreixement* and *Decrecimiento*).

Décroissance as a social movement entered the scene in Lyon in 2002 in the instance of a protest arising from the convergence of anti-developmental and anti-advertising movements. That same year Paris hosted the conference *Défaire le développement, refaire le monde* (Unmake development, remake the world) at UNESCO and in 2004 degrowth entered a larger public debate within the monthly degrowth magazine *La Décroissance, le journal de la joie de vivre*. Officially, the English term degrowth was introduced at the Degrowth conference in Paris in 2008, which marked the birth of degrowth as an international research area. The First International Conference on Socially Sustainable Economic Degrowth for Ecological Sustainability and Social Equity held in Paris, saw the participation of a number of scholars supporting the degrowth slogan gathered to develop the idea of degrowth and resulted in the “Paris Degrowth Declaration”.

Degrowth is described as utopian, subversive (Kallis and March 2015), a decolonization of the imaginary (Latouche 2009) an economic concept and a social movement (Demaria et al. 2013). It is all these things, simultaneously. Degrowth can be most broadly defined as: “*an equitable downscaling of production and consumption that increases human well-being and enhances ecological conditions at the local and global level, in the short and long-term*” (Kerschner, 2010). This general formulation of the degrowth theory harbors two different conceptual paradigms. The first, known as *GDP degrowth*, *Economic Degrowth* or *Planned Economic Contraction*, regards a call for significant downscaling of production as measured by the GDP indicator. The second, instead focuses on the consequent reduction of consumption and is thus known as *consumption degrowth*. Therefore, in general terms degrowth advocates for a significant and gradual reduction of production and consumption to bring the economy back into balance with the social and ecological sphere of the world in a way that reduces inequality and improves human well-being. However, in addition to this most far-reaching definition, degrowth theory has evolved into a variety of different characterizations. To capture the multi-faceted nature of the theory, the following section outlines and describes the main principle and beliefs, as well as some limitations, of diverse characterizations of degrowth.

1.1 Sustainable Degrowth

Sustainable degrowth calls for a socially sustainable and equitable reduction of society’s throughput. The term *throughput* was introduced by Herman Daly in Steady State economics and refers to the flow of materials and energy a society extracts, processes, transports and

distributes, to consume and return back to the environment as waste, in Daly's words: "*the entropic physical flow from nature's sources through the economy and back to nature's sink*".

To provide consistent background on the existing debate around sustainable degrowth in economics, the following section will outline Daly's definition of *sustainable development*, and special attention will be addressed to the contraposition in literature between the theorization of *de-growth* as formulated by Nicholas Georgescu-Roegen and Daly's theorization of the *steady state economy*.

When considering the competing definitions of sustainability, one utility-based and the other throughput based, Daly rejects the former and accepts the latter. *Utility-based sustainable development* refers to the need to sustain the utility of future generations in order for it to be non-declining, where utility here is the average per capita utility of members of a generation.

According to the throughput-based definition of sustainability, throughput should be sustained. What is meant by this is that the capacity of the ecosystem to yield a flow of natural resources should not be weakened. In other words, the natural capital should be kept constant. Daly rejects the utility definition arguing that utility is a non-measurable concept which cannot be bestowed to future generations, whereas throughput can. By throughput Daly defines sustainability in terms that are measurable and transferable across generations:

Sustainability is a way of asserting the value of longevity and intergenerational justice, while recognizing mortality and finitude. (...) Sustainability in the sense of longevity requires increasing reliance on the renewable part of the throughput, and a willingness to share the nonrenewable part over many generations. Of course, longevity is no good unless life is enjoyable, so we must give the utility definition its due in providing a necessary baseline condition

Daly criticizes the economic conceptualization of development as global growth and deems it to be an unsuccessful theorization of progress for reasons related to environmental sustainability and social equity. Considering macroeconomy as a part of the "Whole", where the "Whole" is the ecosystem, Daly states that ecological limits are nowadays converting economic growth into uneconomic growth, meaning that the current increase in throughput is actually increasing its costs rather than its benefits. As economic growth is achieved, it does so at the expense of a finite ecosystem incurring in costs such as pollution, depletion and sacrificed ecosystem services which are most often worse more than the benefits associated to extra production. Moreover, even in a scenario in which growth entails no environmental costs, aggregate growth in GDP will not trickle down to low-income classes and make them better off. Augmented productivity and growth cannot be thought to increase everyone's *relative* income. Daly argues that welfare is in fact a function of relative rather than absolute income and thus depends on distributive inequality. If welfare is a function of relative income,

this implies that growth will increase everyone's income proportionally making no one better off. *If growth increases the income of only some people, then the welfare gains of the relatively better off are cancelled out by the losses of the relatively worse off.*

To sum up, development cannot be achieved by growth as it has been increasing environmental and social costs faster than how it has been increasing production benefits, without improving welfare. Daly calls for policies that recognize throughput as basic concept and that charge adequately for resource rents to limit the scale of the macroeconomy relative to the ecosystem and to provide a revenue for public purposes. He further encourages the protection of policies from the externalization of costs and from the globalization-driven excessive competition that come at the expense of living standards.

To correctly examine the contraposition, while in fact also the theoretical adjacency, between Daly's steady-state economy concept and that of economic degrowth, it is critical to delve into the history of the steady state economy. The term stationarity state was first introduced by Adam Smith in 1776, who, like many other classical economists, believed growth to be the source of all wealth and deeply feared stationarity as it coincides, according to him, with the inevitable endpoint of economic growth and development caused by population growth and decreasing returns.

John Stuart Mill's vision of stationarity served as an inspiration for Daly's theorization of a desirable steady state. Mill described stationarity as: *"a well-paid and affluent body of labourers; no enormous fortunes, except what were earned and accumulated during a single lifetime; but a much larger body of persons than at present, not only exempt from coarser toils, but with sufficient leisure, both physical and mental, from mechanical details, to cultivate freely the graces of life"* and believed it to be a large improvement to the actual state of life. With the industrial revolution, technological progress brushed away all worries correlated with the possibility of stationary state as now infinite growth was considered possible. Schumpeter, instead, defined the stationary state as "circulation" which indicates an economy which consumes everything produced in each period without accumulation, savings or profits and was then followed by Keynes which conceptualized an ontological steady state, a "quasi-stationary" community. According to his theorization such community would be characterized by stable population and generations full employment, a near zero marginal efficiency of capital and so called "euthanasia of the rentier".

Georgescu-Roegen's (1970) flow-fund model deeply influenced Daly's normative concept of an ontological steady state economy. His analytical model features the distinct employment of stocks, funds, flows and services. Stocks serve as input in the economic process until depletion and can be transformed into flows. Considering for example the transformation of fossil fuels into heat, according to such model fossil fuels are considered stock whereas heat

would represent the flow. Capital, people, and land (funds) transform flows into desirable outputs such as consumer goods but also undesirable outputs like waste. Funds transform factors of production into services, but at a limited rate. Human capital cannot be thought to be exploited for infinite hours a day and the use of capital and land is, as well, limited in various ways. Georgescu-Roegen sustained that the economy should make use of the services coming from renewable funds, and not of the flows from depletable stock. Daly, in his normative conceptualization, does not distinguish among flows and funds and refers to throughput instead. This allows him to define the steady state as: “*an economy with constant stocks of people and artefacts, maintained at some desired, sufficient levels by low rates of maintenance ‘throughput’, that is, by the lowest feasible flows of matter and energy from the first stage of production (depletion of low entropy materials from the environment) to the last stage of consumption (pollution of the environment with high entropy wastes and exotic materials).*”

$$\frac{\text{service}}{\text{throughput}} = \frac{\text{service}}{\text{stock}} \times \frac{\text{stock}}{\text{throughput}}$$

I will refer to the above equation to describe Daly’s steady state economy SSE formulation. In an economy made up of “stocks of people and artefacts” these are maintained at sufficient levels by throughput, this refers to the first ratio of service on throughput which is given by the product of the other two. The first ratio on the right side of the identity refers to stock-service efficiency: it describes the production of a maximum amount of service from the minimum amount of stock. The other ratio instead represents stock-maintenance efficiency, the maintenance of a maximum amount of stock given a minimum amount of throughput. The product of the two will result in the service benefit, which should be maximized, at the cost of throughput, which should be minimized. In Daly’s equation above, it is possible to recognize a reformulation of the degrowth’s maximum exponent Serge Latouche’s *Rs (Restructure, Redistribute, Reduce, Reuse and Recycle)*.

Daly proposes we should achieve SSE through three institutions: (1) Aggregate physical depletion quotas for stabilizing the stock of physical artefacts and to keep throughput below ecological limits (the ratio of stock on throughput) (2) An institution to limit the degree of inequality in sharing the constant stocks and (3) some form of population control to address the stock of people. The latter is a controversial discourse that is conveniently omitted, not only by the mainstream sustainability discourse but also in the more radical de-growth literature which will be further developed in the next session.

Criticism to such a theorization of the SSE mainly derive from thermodynamics, the science of energy. The harshest critique to Daly’s theory came from Georgescu-Roegen’ “fourth-law based” rejection. Daly appealed himself to the fourth law of thermodynamics to state that “*in a closed system, the material entropy must ultimately reach a maximum*”. In plain words, this

quote states that, according to Georgescu's view, a complete recycling is impossible. Georgescu rejects the idea of a steady state economics and admits the declining state to be the only possible alternative.

Before providing a detailed picture of the criticism around Daly's formation of the steady state economics, a minor digression is necessary to consider the Entropy Law, and more in general how the law of thermodynamics have been applied to describe and understand economic processes.

The basic concern of economic processes is entropy. However, prior to introducing entropy to the discussion, it might be useful to outline the four laws of thermodynamics. The *first law of thermodynamics* is the formulation of the conservation of energy, its states that the total energy in a system remains constant, although it may be converted from one form to another.

The second law of thermodynamics in simple terms states that "heat always flows only from hot objects to cold ones", never in the opposite direction. Therefore, in economic terms, a country or industry that raises its productivity and perturbates the economic energy-supply generates benefits for other economies for example by teaching them new production methods or sharing technological progress, but the process does not work in reverse. The country or industry with weak production and low productivity will affect its neighbor with positive perturbations. Energy moves unidirectionally from the system having more energy to the system having less. *The third law of thermodynamics* was defined by Walter Nernst, who said that you cannot reach a temperature that is close to zero by means of a series of finite processes. This is because the closer you approach zero, the more entropy will assume a specific value different from zero. In Walras's *diamond equilibrium* in which all prices and quantities are in equilibrium in an auction in which the information is also sufficient and perfect, there is not, nor can there be, any perturbation. However, in the real world, there will always be some degree of misalignment in prices and quantities, as well as missing information. These misalignments make it impossible for entropy to have a null value. Also, a positive perturbation such as increased production, consumption, or innovation, will generate energy and move the economy away from the Walrasian absolute zero.

Central to such a theory, is the entropy concept. Georgescu-Roegen's basic concern is in fact with entropy as he calls for the integration of economics with the model of mechanical science, as a science that can accommodate the complexity, indeterminism, and human factors of economic processes.

Entropy refers to the ratio of two quantities, heat, and temperature. In 1865 Rudolf Clausius introduced entropy to physics in the following way: for a system, a change of entropy ΔS , is equal to an element of heat ΔQ either added or subtracted from the system, divided by its

Kelvin temperature T at the moment of transfer of the ΔQ . Considering an isolated system consisting of two bodies in contact, one at temperature T_1 and the other at temperature $T_2 > T_1$, heat will flow from the hotter body to the colder body until the two temperatures are equal. The colder body gains entropy, $\Delta S_1 = +\Delta Q/T_1$, and the hotter body loses entropy $\Delta S_2 = -\Delta Q/T_2$. But since $T_2 > T_1$, $\Delta S_1 > \Delta S_2$, which implies $\Delta S_1 + \Delta S_2 > 0$ and that in coming to thermal equilibrium the system of two bodies gains entropy. Several years later, Boltzmann showed that entropy could also be defined as the measure of the order or disorder of a system. Low entropy is equivalent to a relatively ordered system and high entropy to one that is relatively disordered. Order in a system can be defined as the limitation of possibilities for location or motion of the particles within the system.

In terms of order, the entropy principle tells us that the natural development of any system is toward states of greater disorder. Georgescu-Roegen states that economics is about low entropy, referring to the efforts of mankind to maintain the order that is necessary for life. Growth and learning imply an increase of order and a decrease in entropy, this happens at the expense of compensating increases in the surroundings with which the biological organism interacts. Hence, a person must have a steady supply of food, fuel, and various types of ordered surroundings for his life. These are all low-entropy elements and Georgescu-Roegen states that their conversion to high entropy for the sake of the enjoyment of human life is what economics is all about.

Retracing our step and going back to the criticism over the SSE, a third view is worth mentioning which was brought forward by Robert Ayres whose position has become to be known as the *energetic dogma*. Ayres criticizes Daly's and Georgescu-Roegen's interpretation of thermodynamics by recalling that according to the first law of conservation of mass, matter is neither produced nor destroyed and that the earth cannot be considered as an isolated system but rather as a closed system. The difference between the two being the fact that in an isolated system there are no exchanges of energy or matter with the outside, whereas a closed system receives an external energy influx, which in the earth's case corresponds to the sun. Ayres's theory thus converges to the crucial role of the sun's external influx which, according to his view, contains the potential to secure the right amount of energy to allow for complete recycling.

Georgescu-Roegen's theory on the inevitability of a declining state is not to be seen necessarily in contrast to Daly's SSE formulation. Since Georgescu-Roegen's theory builds on the argument that degrowth is essential from the moment that industrialized countries have been growing above sustainable limits, this does not automatically exclude Daly's SSE. It could in fact be possible to combine the two views in a way that establishes a commonly accepted notion of throughput to maintain in the economy and extend SSE on a global level.

Allowing SSE to be equitable both at the national and at the international level, would effectively suggest for the developed countries the need to de-grow to allow for, on the other hand, economic growth in the underdeveloped countries. This would result in a balanced steady state economy based on a commonly agreed sustainable level of stock and throughput (Kerschner, 2010).

1.2 Population Degrowth and Neo-Malthusianism

The dispute around population control is one rather contentious discourse in the economic and ecological literature, population degrowth and Neo-Malthusian theorists are in fact quite frowned upon and associated to a number of controversies. An essential concern of ecological economics is in fact the *Malthusian* question, the tension between human population and the availability of natural resources.

When formulating his *population principle*, Malthus predicted that on the one hand, the human population would grow exponentially at a geometric rate, whereas, on the other, agricultural production would only be growing linearly, or worse, less than proportionately to the increased labor input, subject to decreasing returns. The resulting continuous overshooting of the environment's carrying capacity was predicted to cause "misery and vice". According to Malthus, "misery" would come in the form of positive checks that would downsize the overshoot with a consequent increase in death rate due to the outbreak of war, famine, and disease. Malthus defined as "vice" those preventive checks cutting back the overshoot via practices such as abortion and birth control. In the second edition of his essays, Malthus also introduced "moral restraints" as possible preventive checks, chastity, and late marriage.

In contrast to Malthus' pessimism, in the 1900 an international social movement (of Emma Goldman and other activists) in Europe and America theorized a halt in population growth by will of low-income classes. This neo-Malthusian movement was based on a "bottom up" activism led by women's freedom, a population-driven downward pressure on wages and the threat to the environment. This theory is to be distinguished from the more recent top-down Neo-Malthusian approach to population control, imposed by international organizations. Most generally, we can define four different varieties of Malthusianism. Malthus' original view that population would grow exponentially unless limited by war and pestilence (or his more unlikely conceptualization of restraints of chastity and late marriages). With a consequent subsistence crisis due to a less than proportionate growth in food and agriculture.

Neo-Malthusianism of the 1900s, if human population could regulate their own growth by contraception and rooted in women's freedom. This wave of neo-Malthusianism explained poverty with social inequality and was based on the idea of a "conscious procreation" to

prevent low wages and pressure on natural resources. Neo-Malthusianism after the 1970s, which consisted in a top-down practice imposed by governments, according to which population growth was to be seen as the main cause of poverty and environmental degradation which called for the State's intromission in contraception, sometimes even without women's consent. Finally, an anti-Malthusian view assuming human population growth is not major threat to the natural environment and is even conducive to economic growth.

Malthus population principles have most likely been postponed because of the enormous energetic subsidy that the human economy has managed to obtain. Once this subsidy begins to decline, we might reconsider the "Malthusian devil" (Keynes, 1919).

Stabilization or de-growth of the economy inevitably requires stabilization or degrowth of the human population. The earth's carrying capacity of the human species is defined by the maximum sustainable impact (I) of our society. Impact (I) is given by the equation: $I = PAT$, therefore the product of population size (P), its affluence or consumption (A), and the environmental damage caused (T). These factors are not independent. For example, T varies as a nonlinear function of P, A. This dependence is evident in the influence of population density and economic activity on the choice of local and regional energy- supply technologies and on land management practices. Per-capita impact is generally higher in very poor as well as in affluent societies. Demographic statistics give a misleading impression of the population problem because of the vast regional differences in impact. Although less-developed nations contain almost four-fifths of the world's population and are growing very rapidly, high per-capita rates of consumption and the large-scale use of environmentally damaging technologies greatly magnify the impact of industrialized countries. (Daily, Ehrlich, 1992). The reduction of consumption by sufficiency and the reduction of environmental harm by acting according to an environmental conscience, cannot proceed indefinitely and will inevitably continue to grow if population is not stabilized or decreased (Kerschner, 2010).

An absurd top-down market based rather inappropriate policy proposal for the stabilization of such a population growth was put forward by Boulding in 1964. Boulding suggested creating a market for birth licenses, according to which to have more than two children, thus, to have more than the simple reproduction rate, one would have to find other couples who were willing to sell all or part of their licenses.

The treatment of the population issue by degrowth authors is rather scant and most often incoherent. Georgescu-Roegen himself was already unclear about policy recommendations and instead focused on the question of how many people the planet could potentially support which, in his view, coincided with the number of people that could be fed by organic agriculture. Other supporters of the degrowth movement have been dismissive of population

control as a way to alleviate environmental problems. Latouche finds population reduction to be a non-solution or rather a lazy solution embraced by conservatives interested in keeping the economic growth dogma alive. He strongly criticizes proposals aimed at limiting developing countries' population expansion, given that developing countries are also the ones that consume less of the planet's resources. He accuses such an approach of perpetuating the mechanistic understanding of societal development characteristic of the growth ideology. According to Latouche, an equitable distribution of existing resources is to be considered more important than world population growth and believes that once a degrowth society will have contained overconsumption and excess, the resolution of the overpopulation problem will easily follow.

1.3 Radical Degrowth

The term radical growth was coined by Van den Bergh and refers to a notion of degrowth that covers a much broader concept than the above definitions. To summarize the essence of such radical degrowth it is useful to provide Fournier's explanation of such a comprehensive concept, he in fact has called it "escaping from the economy". Radical degrowth requires radical changes in aspects like values, ethics, preferences, financial systems, markets, work and labor, the role of money, profit-making and ownership (Latouche, 2009; Schneider et al., 2010). From the above definition it is evident how such a notion of degrowth encompasses all the above conceptualization of degrowth but goes even further.

Van den Bergh contributes to the literature on the issue by presenting an interesting critique to such a notion of degrowth. He finds writings on this issue to be rather *normative and idealistic* rather than *analytical and realistic*. Such a grand and drastic idea would hardly find political support in favor of it in a democratic system if it not accompanied by a thorough analysis. Such a definition makes it rather unclear how to upscale radical changes in lifestyles to society as a whole given that lifestyles and culture outside of the norm have always been existing, but the adoption of such cultures never extended to the masses. Van den Bergh's quite sensibly notices how such an idea behind degrowth remains motivated by political ideology on justice and equity rather than providing an imminent solution to the "ecological imperative". Radical degrowth is risky in so far as heterogeneity in the behavior of humans as economic and social agents is not considered. When theorizing such a radical change it is of great importance to consider limits and preferences of human behavior. Van den Bergh proposes an alternative view to such notion of degrowth which can be summarized as opposing the GDP indicator rather than GDP growth, a-growth rather than de-growth.

To draw a clearer picture of the literature around the degrowth movement, it might be useful to shed light on Fournier's work *Escaping from the economy: the politics of degrowth*,

specifically how its identification of democratic choice as a central to the process of radical change.

Fournier believes that the proposal of alternative economies must begin from a profound questioning of the importance accorded to economy, opposes economic determinism, and proposes to start back from the political sphere. The starting point of the degrowth movement is to politicize the economy, to reveal it as an abstract idea, a self-referential system of representations (Latouche, 2005) rather than an objective reality, a set of “given” facts and forces as it is commonly presented. Fournier cites Gibson-Graham’s reconceptualization of economic relations in the Communities Economies Collective (2001) as a way of politicizing the economy. The Community Economies Collective has reframed economic activities in terms of the co-existence of different forms of transactions, labor, production, and distribution methods. Fournier conceives degrowth as the fundamental shift from an economic imperative to democratic choice as the emphasis on democratic choice is accompanied by a prioritization of human and social values even above ecological ones.

2. Degrowth and feminist economics: reconceiving unpaid work

Sections above have presented a rich outlook on degrowth, embodying possible conceptions and approaches to the degrowth theory. A varied and miscellaneous perspective on such an intricate and contentious topic is necessary to get a grasp of the current debate in literature. Following such a conceptualization, however, the degrowth idea can be summarized as the combination of two mutual aims: downsizing economic growth while also increasing societal well-being. This notion is based on the idea of the possible decoupling between prosperity and economic value, “*prosperity has rather to do with our ability to flourish: physically, psychologically and socially. (...) prosperity hands on our ability to participate meaningfully in the life of society*” (Jackson, 2009). Wealth and well-being, in a degrowth-reconceived society, are defined according to non-market values, non-materially based gains for individuals and society.

In respect to this reconceptualization of society, a fundamental challenge regards a societal reorganization of work within a normative framework of downscaled production. Central to such a question is the role of unpaid work in a newly defined society.

Contrary to remunerated labor, whose connotation is strongly economic in that it contributes to economic growth and productivity, unpaid labor is nonprofit oriented and organized on an individual basis. The rest of this paper will outline how a societal redefinition of work is necessary to a “degrown” society by focusing on unpaid care-work’s function.

Prior to outlining how degrowth can contribute to a redefinition of care-work in more equal society, the following section will describe the main features and challenges posed by feminist economic theories.

2.1 Feminist economics

Feminist economics emphasizes that supposedly neutral economic processes produce gendered relations of power and domination, which are however largely ignored both in orthodox and most heterodox economic literature. Feminist Economics developed as a heterodox economic approach beginning in the 1980s, to recognize the androcentric nature of economic theory. However, it only developed as an organized alternative school of thought with the institutionalization of the International Association for Feminist Economics (IAFFE) in 1992 (Strassmann 1992) and with the foundation of the journal *Feminist Economics*. In addition to heterodox Feminist Economics, there are also orthodox positivist approaches to Gender Economics such as Human Capital Theory, New Home Economics and Behavioral Gender Economics. It pursues the common goal of overcoming androcentrism in economics by

making gender-specific power and domination relations structurally visible in order to make a gender-equitable society possible (Dengler, 2020).

Feminist economics identifies gender as the fundamental organizing principle of the economy, one that is in contrast with the mainstream economic formulations and is not confined in market-imposed limits. Pivotal to feminist work is the redefinition of the distinctions between formal and informal economy, paid and unpaid work, market and non-market activities, productive and reproductive labour (MacDonald, 1995).

The economics of unpaid labor

The definition of unpaid care work and its recognition as work has been a crucial issue for feminist economics. Reid (1934) coined the phrase “third-person criterion” to assert that since one can delegate activities like household work, such as cooking, cleaning and childcare, to a third person, those activities are work. With the term unpaid care work, we are mainly referring to unpaid care work. The definition of care work has evolved over time and there have been numerous attempts to fully capture its meaning. Following Folbre (2018), we can distinguish among *direct care*, *indirect care* and *supervisory care*. Direct care refers to activities that require a high degree of personal involvement such as childcare, care of elder or people with disabilities. Indirect care activities instead are activities such as cooking, cleaning and laundry, which do not require intimate engagement with people, and supervisory care refers to the supervision of children while simultaneously engaging in other activities related to household work.

Crucially, paid care work is shaped by gender and race inequalities and is based on an underlying gendered division of labor. For this reason, feminist studies rely on an intersectional lens (Crenshaw, 1989; Collins, 1998), as the naturalization of women’s caring attitude and capacity is used as a justification for this segmentation and most paid caregivers are likely to be ethnic minorities or immigrants (Duffy, 2011). While sensibility to such a topic has increased recently and norms have adapted in a way that *some* men in *some* countries carry out activities related to unpaid care and domestic work, women are still responsible for the majority of the unpaid labor. (Benería, Berik and Floro, 2015; Kan, Sullivan and Gershuny, 2011).

Women are asked to carry out care work as if they were not also working in formal employment and are asked to work as if they were not also held accountable for carework. This dual responsibility results in an unequal distribution of leisure and wellbeing as well as constraining women’s involvement in the labor market. Unpaid caregivers are disadvantaged in terms of reduced bargaining power both in the labor market and in the household. The penalty that caregivers face relative to non-caregivers and that mothers face relative to

women without children, is responsible for pay disparities in formal employment. The fact that women are the ones carrying the burden of unpaid labor, translates into a variety of deprivations that imply a deterioration of their well-being as well as the consequent economic imbalances due to structural gender disparities in the labor market. Overwork in both paid and unpaid labor negatively affects women's health, well-being, and socioeconomic status.

Methodological Implications

The System of National Accounts does not conceive unpaid care work as economic activity and, as a consequence, it does not account for the output resulting from these activities. Feminist economists aim at bringing unpaid work "out of the statistical shadows" (Benería, Berik and Floro, 2015) since the correct measurement and valuation of women's unpaid labor is essential to address the implications of women's unpaid work's statistical invisibility. The way in which economic activity and output are measured are the result of a systemic patriarchal decision structure which undervalues women's contributions to society. economic activity and output are measured are the result of a systemic patriarchal decision structure. Some feminist economists have revised historical statistics that made the work of women invisible. Folbre and Wagman (1993) re-estimated growth rates for the United States between 1800 and 1860 using imputed values of the size and sectoral allocation of non-market household work. Jane Humphries (1990) argued against the mainstream view that eighteenth-century common rights were insignificant to the working people and re-evaluated the role of enclosures in Britain by considering the value of the commons to women. Women and children were in fact the primary exploiters of common rights and their loss led to changes in their economic position and to an increased dependence of families on wages and wage-earners.

The best way to measure unpaid work is by outputs (Goldschmidt-Clermont 1993), however the approach adopted by most statistical offices is that of measuring inputs. Two main input-method are used to impute a monetary value for unpaid household work which mainly represent the estimated cost of performing unpaid work in the market: *replacement cost methods* and *opportunity cost methods*. Moreover, these methods can be estimated according to a *generalist* or a *specialist* approach. The former method multiplies the total time spent in housework by the average wage of a domestic worker and the latter method multiplies the total time spent in housework *task* by the average wage of each specialist (cook, housecleaner, etc.). The replacement cost method estimates what it would cost to hire someone to carry out a specific activity; the opportunity cost method instead estimates what the individual would have earned if they had employed their time in formal labor. The method based on opportunity cost is widely dependent on the education and experience of the individual, according to such method a baby-sitting activity carried out by a heart surgeon, or

a university professor is valued much more than the same meal prepared by a low-wage worker. These measurement criteria are likely to undervalue wages of female-dominated occupations given that using market wages to value women's work will reflect the undervaluing of women's paid work. Moreover, feminists are concerned about the fact that assigning a value to unpaid work does not change the fact that the work is still unpaid, and it might convey a false recognition.

Intra-household issues

Another major challenge for feminist economists is related to the intra-household economic dimension in response to the lack of focus in the household as an "economic site" (MacDonald 1984, Woolley 1993, Folbre 1986, Humphries and Rubery 1984, Hartmann 1981). Feminist economists request the formulation of economic models describing the economics of the household that consider and describe conflicts of interest and existing patriarchal power relationship within and outside the family. McElroy and Horney (1981) turned to game theory to formulate Nash-bargained household decisions, Manser and Brown (1979) propose a bargaining analysis of households and marriage. These models still lack a correct incorporation of basic sociological concepts such as social norms, endogenous preferences, and collective action (Folbre 1994).

Household-decision making, division of labor and allocation of resources are important in feminist economist literature, empirical research has reported significant intra-household inequality in the distribution of income and other resources as well as inequality in access to education and credit. Important questions addressed in this field include the study of households' reactions to external economic pressures such as price changes and inflation. Another important issue regards allocative reactions to changes in labor market alternatives, therefore how is labor reallocated and what are the workload and well-being differentials among family members. Most important, and pivotal to such a discourse, is the role of gendered division of labor (market and nonmarket) within the household, and the consequent differentials in income and resources allocation.

Moreover, we must critically assess what we mean when referring to a "household. Most household-surveys are in fact conducted according to a definition of nuclear household that omits single-parent households for example. In addition to this mere classification aspect, though data construction norms based on neoclassical economics force us to either study individuals or households as units of analysis, what we are really interested in examining are social relations in a much broader sense. Research is focusing on finding an appropriate way to take these aspects into account in economic modeling.

Gendered processes in the paid labor market

It is crucial to account for gender when assessing the formal labor market. Empirical literature has thoroughly assessed female labor force participation and gender wage differentials (Blau and Ferber, 1986; Brown and Pechman, 1987). The factors driving gender differences in the labor market can be broadly categorized into three forces (Azmat and Petrongolo, 2014):

- i. Productivity
- ii. Preferences
- iii. Discrimination

Altonji and Blank's (1999) work on gender inequalities within the labor market mainly related to productivity differences sourcing from discrimination as the main source of gender gap in wage and employment. However, as the authors clearly specify, the lack of direct evidence on discrimination and gender preferences is an obstacle when trying to distinguish among the three forces.

Gender discrimination in the labor market is described as the situation in which equally productive men and women are remunerated and rewarded differently, highlighting thus a discrimination residual in measuring differences in productivity. While some empirical methods have been adopted to correctly capture discrimination in the labor market (Blinder, 1973; Oaxaca, 1973, Neumark, 1996, Goldin and Rouse, 2000), it is not trivial to provide a summary of their results. Broadly speaking there has been significant evidence of discrimination against women in high-status and male-dominated jobs as well as discrimination against men in female-dominated jobs.

There exist two main economic models of gender discrimination, *taste-based discrimination*, in which employers derive disutility from employing women compared to men, and *statistical discrimination*, in which employers use gender to deduce signals of unobserved productivity differentials. Existing literature on gender discrimination does not account for this difference enough.

A huge body of empirical work has been providing evidence on gender differences in preferences that affect job choice and labor market outcomes. Specifically, three different aspects related to preferences are able to shed light on within and between job disparities.

Different attitudes towards risk and competition reveal differential preferences among genders, which translate to differences in job choice and labor market outcomes. Differences in bargaining behavior affect wage disparities and career advancement, and more generally differences in social preferences offer insights into how men and women act in the workplace.

Eckel and Grossman (2008), Croson and Gneezy (2009), find that men are more risk prone than women carrying out experiments using real and hypothetical gambles. It is worth noting that this differential attitude towards risk is socially driven, it come as the result of the adoption of systemic sociological and economic implicit rules, differences in attitudes among genders cannot only be explained merely biologically. Jobs entailing higher risks are also characterized by higher mean earnings and are typically male dominated. Women's risk aversion leads to their overrepresentation in jobs with lower mean and lower variance salaries.

Gender-correlated risk aversion has been attributed to both differences in emotional reactions to uncertain situations (Loewenstein et al., 2001), or to confidence (Soll and Klayman, 2004).

Another supposition for why earnings of men and women differ can be found in psychological literature in women's competitive negotiation avoidance (Babcock and Laschever, 2003). Small et al. (2007) find a clear gender gap in the likelihood of negotiation, with women asking for higher payment less often than men. Attitudes towards negotiations can also be analyzed by means of ultimatum games, where women and men are found to make similar offers (Eckel and Grossman, 2001; Solnick, 2001), however women are less likely to reject offers (Eckel and Grossman, 2001) and are more demanding than men when the opposer is female and less demanding when the opposer is male (Solnick, 2001). Gender differences in preferences might help understand why men and women self-select into certain sectors or jobs; such preferences have been analyzed in a number of experimental settings.

3. Feminist Growth Critique

As outlined in the handbook article *Degrowth* in the *Routledge Handbook for Feminist Economics* (Dengler, 2020), central to the debate of feminist economics are the critiques to:

- i. The gross domestic product as a measure of economic activity
- ii. The narrow concept of labor
- iii. The idea of homo economicus

The feminist critique of gross domestic product (GDP) as a measure of economic activity was formulated by Marilyn Waring (1988) and has then been developed many times since. It is mainly based on the recognition that GDP does not consider the indispensable and unaccounted contribution that ecological processes, unpaid care and reproductive work make to production process in the monetized economy, thus rendering it structurally invisible. The second critique regards the narrow conceptualization of labor in neoclassical, but also in Keynesian and Marxist economics, is in fact strictly correlated with the critique to GDP. Such a conceptualization equates proper work with wage work, structurally devaluing all non-monetized but socially necessary work, for example unpaid care work, subsistence work and community work, which do to the prevailing division of labor are still prevalently performed by women (Himmelweit 1995; Donath 2000). Lastly, feminists critique the fundamental agent of mainstream economics: the fully rational, egoistic, and independent homo economicus (Ferber and Nelson 1993; Habermann 2008).

The feminist critique to growth follows naturally from the critique of the economy which was briefly outlined in the previous section. If economic growth is measured as a percentage increase in GDP and GDP structurally excludes unpaid work, what we are falsely labeling as “economic growth” is in fact not accounting at all for the population’s wellbeing, as well as mismeasuring economic activity. Knobloch (2019) refers to such a process as “pseudo-growth”. Nonetheless, many feminist economists in the field of gender economics and in heterodox feminist economics do not really question the paradigm of infinite economic growth. Such a critique stems rather from feminist economists who are both concerned about the ecological and feminist economic critique. As noted in Dengler’s dissertation, one can name three important streams of feminist engagement with a feminist growth critique:

- i. The Bielefeld subsistence approach
- ii. Materialist ecofeminism
- iii. Feminist ecological economics

The Bielefeld subsistence approach

The Bielefeld subsistence approach claims that capitalism, colonialism, and patriarchy are structural to the growth paradigm. Rosa Luxemburg already claimed that the exploitation of a non-capitalist “outside” was the central prerequisite for the stabilization of the capitalist mode of production. Bielefelders identified three non-capitalist “outside” elements: unpaid labor, the natural environment, and countries of the Global South. Bielefeld women refer to these elements as the three “white man’s colonies” (Von Werlhof, Mies, and Benholdt-Thomsen, 1983), underlying how such “conceptual environments” are undervalued and structurally invisible within the growth paradigm.

Materialist ecofeminism

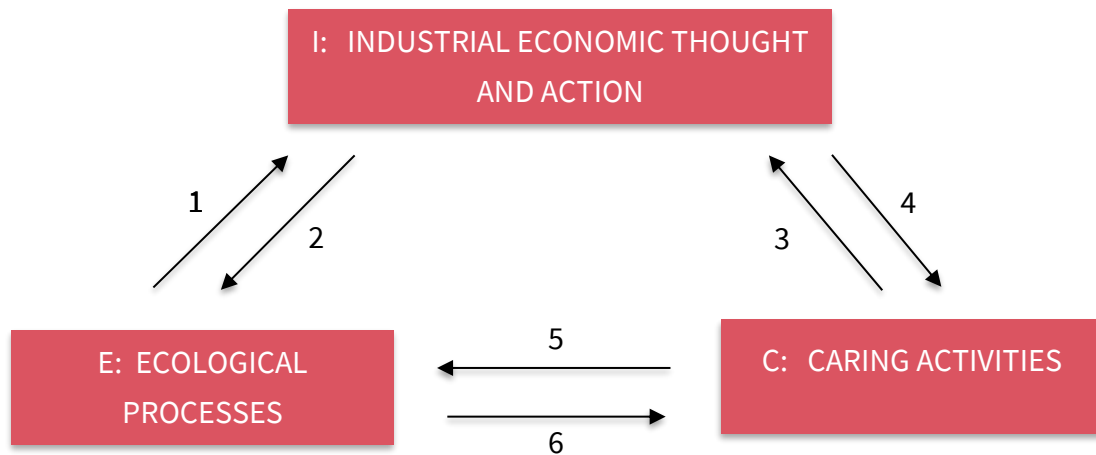
Materialist ecofeminism is closely related to the Bielefeld approach, it is based on the idea that gender inequality is not a byproduct of other inequalities but represents a material relation of inequality between dominant men and subordinate women. Materialist feminists identify capitalism and patriarchy as fundamentally responsible for women’s oppression and emphasize the socially constructed notion of gender. Thus, gendered division of labor is the result of a socially constructed materiality responsible for, among other things, the devaluation of female-codified care work. Val Plumwood (1993) underlines how the achievement of a truly equal society requires to overcoming the binary hierarchical organization of society which neatly distinguishes among culture and nature, male and female or production and reproduction. What materialist feminists and ecofeminist political economists strive to demonstrate is that monetizable economy is only the “tip of the iceberg” (Mies 1989) or the “top layer of the cake” (Henderson, 1980). An economy that only recognizes this surfacing layer is one that is ignoring and neglecting a huge part of the economy that keeps the system alive.

Feminist ecological economy

Feminist ecological economy links gender and ecological perspectives both theoretically and practically by building on the compelling critique of the growth status quo. Feminist ecological economists describe the economic importance of women’s environmental, home/care, and community work, the importance of ecological processes for women’s work and health, and the fundamental economic significance of the unmarketed services provided by women and ecosystems (Perkins, 2020). Feminist ecological economics is about the fundamental connections between the problems of economic injustice towards women, ecological degradation, social unravelling in both North and South, global economic inequities, and unstable political and environmental systems worldwide.

Making the invisible visible: degrowth perspectives

There exists a crucial interrelation between the monetized economy and the maintenance economy. It is fundamental to refuse a duality of thought which distinguishes among public and private, visible, and invisible, to recognize how the visible is widely supported by an invisible basis. To mark the importance of caring activities, Jochimsen and Knoblock (1997) developed the ICE model, which presents three elements: industrial economic thought (I), caring activities (C), and ecological processes (E), interrelated in six different ways.



At the top of the triangle, we find the monetary profit-oriented industrial economic processes, based on the exchange value paradigm. At the base of the triangle, there is the maintaining basis of any economy, therefore ecological processes, and caring activities. From the figure it is possible to distinguish the 6 different relations within the ICE model. The first, $E \rightarrow I$ represents how ecological processes constitute the basis and limitation of industrial economic action, $I \rightarrow E$, industrial economic processes modify the ecological processes often also destroying them. $C \rightarrow I$, caring activities carried out by women in our society pose the social foundations to enable economic activity, $I \rightarrow C$, industrial economic processes devalue caring activities, relegating them to the realm of the economically non-important. $E \rightarrow C$ given that ecological processes are indispensable for caring activities, $C \rightarrow E$ since caring activities modify and sustain ecological processes. Departing from such a model, Jochimsen and Knoblock further called for a transition towards a caring economy, one that “stresses the importance of contexts and aims at gathering context-oriented knowledge and know-how. It places such knowledge and know-how at the center and attributes new value to it. It works with the hypothesis that the principles derived from caring activated can be applied to the whole economy, thereby affecting a sustainable treatment of nature and a good society.”

Dengler and Strunk (2018), further develop the ICE model by focusing on the relation between the apex of the triangle and the base of the triangle, analyzing the boundary between the monetary and the non-monetary economy. The authors state that the boundaries between

the productive and reproductive, the valuable and the valueless, the focus and the void of the economic analysis cannot be overcome as long as the economy will keep adhering to a growth and accumulation fixated narrative. Degrowth, by valuing economic activities based on their social value other than their monetary significance, has the potential to overcome the boundary between the monetary economy and the non-monetary supply economy. The most immediate and obvious proposal to enact such a change is an appropriate redistribution of labor and a worktime reduction. Degrowth wants, especially for ecological reasons, to reduce the hours spent in waged labor. A well-known proposal in the degrowth debate refers to the establishment of a four-day week (“Friday Off!”, Kallis et al. 2013). Other models involve reducing the number of working hours per day or granting longer periods of vacation. Most of the care work takes place during a normal workday, for this reason it is important to reshape labor activities by redistributing working hours in the day in such a way that allows for work-sharing.

Communing care

Care work is common in so far as it is the most fundamental basis of social reproduction to which we all contribute and to which we all owe our existence. Care work performed as unpaid labor has served to support capital accumulation and has served to reduce the monetary cost of the reproduction of labor. The cost of supporting the worker, providing assistance to the elderly, of growing and educating future members of the labor force, is not borne by the owner of the means of production, but rather it is shifted to the household. More specifically, to women. From a social perspective, an intrinsic characteristic of care work as commons is the inequality in its production, rather than its consumption, given that it is carried out according to a gendered process which is responsible for women’s oppression.

The works of Silvia Federici, George Caffentzis, Massimo de Angelis and the broader Midnight Notes Collective on commons and communing, emphasize a conceptualization of commons as non-commodified modes of social reproduction to fulfill social needs. The works shed a light on the inequalities correlated to the production of care work and contribute to a degrowth perspective on care. Devising care work as commons implies characterizing it with all elements that are constitutive of commons. It therefore envisages a non-hierarchical regulatory structure and a production and reproduction that takes place via collective and cooperative labor. Commoning care immediately translates in the organization of care work in a non-patriarchal, egalitarian and democratic way. An example of communing care practice is the Regeneración Childcare Collective in New York City, a radical childcare cooperative originally founded to provide care services to low-income queer and minority parents to allow them to participate in social struggles. Regeneración now collaborates with other

independent childcare collectives and cooperatives to foster relations of collective self-management and mutual empowerment across care workers.

Conclusion

The structural devaluation, exploitation and invisibility-zation of women's unpaid labor and the orthodox economic growth model, walk parallel roads. Recognizing that such an exploitation of socially codified female reproductive labor is central for the current economic growth model is a critical prerequisite for a correct understating of the normative implications of the hegemonic economic and social systems. To this end, this paper comes with the aim of providing an alternative view to the current economic growth model which advocates for a careless growth at the expense of individuals', workers', women's, and nature's well-being.

The integration of feminist perspectives into the degrowth discourse is a necessary precondition to truly succeed in formulating a view that puts the reproductive economy of care at the center of degrowth. Overcoming the structure of separation is a fundamental prerequisite for counteracting the discursive and material devaluation of what is not monetarily captured and for being able to place "the good life for all" at the center of a post-growth society. Degrowth can help overcome a dialect based on false dualities that draws a sharp line between formal and informal economy, paid and unpaid work, between the visible and the invisible. The bridging mechanism that theoretically and practically links degrowth theory and feminist economics is the reconceptualization of care work as commons. What is crucial is reconceiving reproductive and care work in a society that attributes the correct value to the invisible.

Whether and how a new economic model founded on degrowth, and feminist economic theory can be enacted as a radical change in our economies and societies, remains rather controversial. Critiques have been made to such a theory, which runs the risk of enhancing or contributing to the continuation of patriarchal, colonial structures if not accompanied by appropriate sensible policies. This paper has outlined different theories, advantages and limitations correlated with degrowth in order to draw the most complete picture as possible of such a complex and disputed topic. Within such an intricate debate, the aim of this work is to shed light on how a reconceptualization of the economy which distances itself from GDP-based measurements of progress, can contribute to the feminist cause and a sustainable future.

In the pamphlet *Salario contro il lavoro domestico* (Wage against domestic work), Silvia Federici writes:

They call it love; we call it unpaid work.

They call it frigidity; we call it absenteeism.

Every time we get pregnant against our will it's a workplace accident.

More smiles, more money, nothing will be more effective in destroying the virtues
of a smile

About the author

Anita Sammarini is a merit awards Economics student at Sant'Anna School of Advanced Studies. She has been conferred the bachelor's degree in International Economics and Management by Bocconi University and will obtain her Master of Science degree in Economics in the upcoming months from University of Pisa and Sant'Anna School of Advanced Studies. She is an IYTT Youth Fellow since the International Youth Conference in November 2022. She has worked as a Junior Analyst trainee for the Italian Ministry of Economic Development and for the Italian National Statistical Institute. She's profoundly interested in econometrics and macroeconomics and is currently writing her final thesis on the theoretical study of econometric methods applied to time series analysis.

Bibliography

- Altonji, Joseph G. and Rebecca M. Blank. "Race and gender in the labor market." *Handbook of Labor Economics* (1999): 3143-3259.
- Aulenbacher, Brigitte; Dammayr, Maria; Décieux, Fabienne (2015): Precarious care, care work and care protests: on the carelessness of capitalism and a care society. In: Völker, Susanne; Amacker, Michèle (eds.): *Precarizations: Work, care and politics*. Weinheim: Beltz Juventa, pp. 59-74.
- Azmat, Ghazala & Petrongolo, Barbara, 2014. "Gender and the labor market: What have we learned from field and lab experiments?," *Labour Economics*, Elsevier, vol. 30(C), pages 32-40.
- Babcock, L. C., & Laschever, S. (2003). *Women Don't Ask: Negotiation and the Gender Divide*. Princeton, NJ and Woodstock: Princeton University Press.
- Beneria, Lourdes., Gunseli. Berik, and Maria. Floro. 2016. *Gender, Development, and Globalization : Economics as If All People Mattered*. 2nd ed. New York ;: Routledge, Taylor & Francis Group. <https://doi.org/10.4324/9780203107935>.
- Blau, F., and M. Ferber (1986) *The Economics of Women, Men and Work* (Englewood Cliffs, NJ: Prentice-Hall)
- Blinder, A. S. 1973. Wage discrimination: Reduced form and structural estimates. *Journal of Human Resources* 8: 436–455.
- Brown, C., and J. Pechman (1987) *Gender in the Workplace* (Washington, DC: Brookings Institution)
- Cohen, Jennifer. "What's 'Radical' about [Feminist] Radical Political Economy?" *Review of Radical Political Economics*, vol. 50, no. 4, Dec. 2018, pp. 716–726.
- Collins, Patricia Hill. "It's All in the Family: Intersections of Gender, Race, and Nation." *Hypatia*, vol. 13, no. 3, 1998, pp. 62–82. JSTOR, <http://www.jstor.org/stable/3810699>. Accessed 3 Apr. 2023.
- Crenshaw, Kimberle. 1991. Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review* 43(6): 1241-99.
- Crosan, Rachel, and Uri Gneezy. 2009. "Gender Differences in Preferences." *Journal of Economic Literature*, 47 (2): 448-74.
- Daly, H.E., 1973. *Towards a steady-state economy*. Freeman, San Francisco.
- Daly, H.E., 1996. *Beyond growth. The economics of sustainable development. The Economy as an Isolated System*. Beacon Press, Boston.
- Daly, H. E. (2008). *A steady-state economy*. Opinion Piece for Redefining Prosperity. Sustainable Development Commission, UK. <http://www.sd-commission.org.uk/publications.php>.
- Daly, H., 2010. From a failed-growth economy to a steady-state economy. *Solutions* 1, 37–43.
- Degrowth, R. (2010). Degrowth declaration of the Paris 2008 conference. *Journal of Cleaner Production*, 523-524.
- Demaria, F. et al. "What Is Degrowth? From an Activist Slogan to a Social Movement." *Environmental Values*, vol. 22, no. 2, 2013, pp. 191–215.
- Dengler, Corinna (2019): Everyday boundary drawing. The role of non-monetary supply economics in a (post-)growth society. In: Book, Carina et al. (eds.): *Alltägliche Grenzziehungen: On the concept of imperial lifestyles and its implications*. Marburg: Westfälisches Dampfboot, pp.135-152.
- Dengler, Corinna (2020a, in press): Degrowth. In: Berik, Günseli; Kongar, Ebru (eds.): *Routledge Handbook of Feminist Economics*. London/New York: Routledge.
- Dengler, Corinna (2020b, forthcoming): Critical Realism, Feminisms, and Degrowth: A Plea for Metatheory-Informed Pluralism in Feminist Ecological Economics. In: *International Journal of Pluralism and Economics Education*.
- Dengler, Corinna; Lang, Miriam (2019): Feminism Meets Degrowth. Care work in a post-growth society. In: Knobloch, Ulrike (ed.): *Ökonomie des Versorgens. Feminist-critical economic theories in German-speaking countries*. Weinheim: Beltz Juventa, pp. 305-330.
- Dengler, Corinna; Lang, Miriam (2020, forthcoming): Commoning Care: Feminist Degrowth Visions for a Socio-Ecological Transformation. In: *Feminist Economics*.
- Dengler, Corinna; Nogly, Joanna (2019): Activist science: a way out of one-dimensionality? In: Bruder, Klaus-Jürgen et al. (eds.): *Paralyse der Kritik - Gesellschaft ohne Opposition*. Gießen: Psychosozial Verlag, pp. 277-288.

- Dengler, Corinna; Seebacher, Lisa Marie (2019): What about the Global South? Towards a Feminist Decolonial Degrowth Approach. In: *Ecological Economics* 157, pp. 246- 252.
- Dengler, Corinna; Strunk, Birte (2018): The Monetized Economy Versus Care and the Environment: Degrowth Perspectives on Reconciling an Antagonism. In: *Feminist Economics* 24/3, pp.160-183.
- Dengler, Corinna; Strunk, Birte (2021, forthcoming): Feminisms and the Environment. In: Pellizzoni, Luigi; Leonardi, Emanuele; Asara, Viviana (eds.): *Elgar Handbook of Critical Environmental Politics*. Cheltenham: Edward Elgar Publishing.
- Donath, Susan (2000): The Other Economy: A Suggestion for a Distinctively Feminist Economics. In: *Feminist Economics* 6/1, pp. 115-123.
- Duffy, R. D., Douglass, R. P., & Autin, K. L. (2015). Career adaptability and academic satisfaction: Examining work volition and self efficacy as mediators. *Journal of Vocational Behavior*, 90, 46–54. <https://doi.org/10.1016/j.jvb.2015.07.007>
- Eckel, Catherine C, and Philip J. Grossman. 2001. "Chivalry and Solidarity in Ultimatum Games." *Economic Inquiry* 39:171-188.
- Eckel, Catherine C. & Grossman, Philip J., 2008. "Men, Women and Risk Aversion: Experimental Evidence," *Handbook of Experimental Economics Results*, in: Charles R. Plott & Vernon L. Smith (ed.), *Handbook of Experimental Economics Results*, edition 1, volume 1, chapter 113, pages 1061-1073, Elsevier.
- Ferber, Marianne; Nelson, Julie (1993) (eds.): *Beyond Economic Man: Feminist Theory and Economics*. Chicago: University of Chicago Press.
- Folbre, N. (1986a) 'Hearts and spades: paradigms of household economics.' *World Development* 14, 245-55.
- Folbre, N. (1986b) 'Cleaning house: new perspectives on households and economic development.' *Journal of Development Economics* 22, 5-40
- Folbre, N., and B. Wagman (1993) 'Counting housework: new estimates of real production in the United States, 1800-1860.' *Journal of Economic History* 53, 275-88
- Habermann, Friederike (2016): *Ecommony. UmCARE for togetherness*. Sulzbach am Taunus: Ulrike Helmer Verlag.
- Habermann, Friederike (2018): *Ausgetauscht! Why a good life for all must be free of tauschlo- gik*. Sulzbach am Taunus: Ulrike Helmer Verlag.
- Himmelweit, Susan (1995): The Discovery of 'unpaid work': The Social Consequences of the Expansion of 'Work'. In: *Feminist Economics* 1/2, pp. 1-19.
- Hochschild, A. R. (2004). *Love and gold*. In A. R. Hochschild, & B. Ehrenreich (Eds.), *Global women: Nannies, maids, and sex workers in the new economy*. New York: Owl Books.
- Humphries, J. (1990) 'Enclosures, common rights and women: the proletarianization of families in the late eighteenth and early nineteenth centuries.' *Journal of Economic History* 50, 17-42
- Humphries, J., and J. Rubery (1984) 'The reconstitution of the supply side of the labour market.' *Cambridge Journal of Economics* 8, 331-46
- Georgescu-Roegen, N., 1971. *The Entropy Law and the Economic Process*. Harvard University Press, Cambridge, Mass.
- Georgescu-Roegen, N., 1977. The steady state and ecological salvation: a thermodynamic analysis. *BioScience* 27, 266–270.
- Gershuny, J., et al. *Gender Convergence in Domestic Work: Discerning the Effects of Interactional and Institutional Barriers from Large-Scale Data*. no. 2, SAGE Publications, 2011, pp. 234–51.
- Goldin, Claudia, and Cecilia Rouse. 2000. "Orchestrating Impartiality: The Impact of "Blind" Auditions on Female Musicians." *American Economic Review*, 90 (4): 715-741.
- Goldschmidt-Clermont, L. (1982) *Unpaid Work in the Household: A Review of Economic Evaluation Methods* (Geneva: ILO).
- Jackson, T., 2009. *Prosperity without Growth: Economics for a Finite Planet*. London, Earthscan.
- Kallis G, March H, 2015. "Imaginarities of Hope: The Utopianism of Degrowth," *Annals of the American Association of Geographers*, Taylor & Francis Journals, vol. 105(2), pages 360-368, March.
- Kerschner, C., 2010. Economic de-growth vs. steady-state economy. *Journal of Cleaner Production* 18, 544–551.

- Knobloch, Ulrike (2019): *Ökonomie des Versorgens. Feminist-critical economic theories in the German-speaking world: An introduction*. In: Knobloch, Ulrike (ed.): *Ökonomie des*
- Latouche, S., 2005. *Come sopravvivere allo sviluppo. Dalla decolonizzazione dell'immaginario economico alla costruzione di una società alternativa*. Boringhieri
- Latouche, S., 2009. *Farewell to Growth*. Polity Press, Cambridge, UK.
- Latouche S. In: Serrano B, editor. *Objetivo Decrecimiento, Colectivo Revista Silence*. Barcelona: leqtor; 2006. p. 23–35.
- Loewenstein GF, Hsee CK, Weber EU, Welch N. Risk as Feelings. *Psychological Bulletin*. 2001 Mar;127(2):267-286. doi: 10.1037/0033-2909.127.2.267
- MacDonald, M. 1995. "Feminist Economics: From Theory to Research," *Canadian Journal of Economics*, Canadian Economics Association, vol. 28(1), pages 159-176, February.
- MacDonald, M. (1984) 'Economics and feminism: the dismal science.' *Studies in Political Economy* 15, 151-78
- Manser, M., and M. Brown (1979) 'Bargaining analysis of household decisions.' In *Women in the Labour Market*, ed. Lloyd, Andrews, and Gilroy (New York: Columbia University Press)
- McElroy, M.J., and M.B. Horney (1981) 'Nash bargained household decision-making: toward a generalization of the theory of demand.' *International Economic Review* 22, 333-49
- Neumark, David, et al. "Sex Discrimination in Restaurant Hiring: An Audit Study." *The Quarterly Journal of Economics*, vol. 111, no. 3, 1996, pp. 915–41. JSTOR, <https://doi.org/10.2307/2946676>. Accessed 3 Apr. 2023.
- Oaxaca, R. 1973. Male–female wage differentials in urban labor markets. *International Economic Review* 14: 693–709.
- Schneider, F., Kallis, G., & Martinez-Alier, J. (2010). *Crisis or opportunity? Economic degrowth for social equity and ecological*
- Small D. A., Loewenstein G., Slovic P. (2007). Sympathy and callousness: the impact of deliberative thought on donations to identifiable and statistical victims. *Organ. Behav. Hum. Decis. Process*.
- Solnick, Sara J, 2001. "Gender Differences in the Ultimatum Game," *Economic Inquiry*, Western Economic Association International, vol. 39(2), pages 189-200, April.
- Strassmann, D. L. "Feminist Thought and Economics; Or, What Do the Visigoths Know?" *The American Economic Review*, vol. 84, no. 2, 1994, pp. 153–58.
- Soll, J. B., & Klayman, J. (2004). Overconfidence in Interval Estimates. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 30(2), 299–314. <https://doi.org/10.1037/0278-7393.30.2.299>
- Taussig, F. W. "Keynes, The Economic Consequences of the Peace." *The Quarterly Journal of Economics*, vol. 34, no. 2, 1920, pp. 381–87.
- Tokic, D. (2012). The economic and financial dimensions of degrowth. *Ecological Economics*, 84, 49-56.
- Van den Bergh, J. C. (2011). Environment versus growth—A criticism of “degrowth” and a plea for “a-growth”. *Ecological Economics*, 70(5), 881-890.
- Versorgens. *Feminist-critical economic theories in the German-speaking world*. Weinheim: Beltz Juventa, pp. 11-40.
- Wagman, B., and N. Folbre (1988) 'The feminization of inequality: some new patterns.' *Challenge* (November-December), 56-9

The economic growth model has been dominating political and economic life for decades, leveraging on the expectation that a sustained economic growth is possible and leading instead to the careless exploitation of the environment, and the devaluation of female's reproductive and care work. This paper is a critique to this hegemonic economic thinking, and suggest a new economic model founded on feminist and de-growth economic theories.

IYTT: INTERNATIONAL YOUTH THINK TANK

Contact:

Urban Strandberg
Managing Director / Co-Founder
urban.strandberg@lindholmen.se • +46 (0) 730-59 55
15 <https://iythinktank.com/>

Supporters:

MARCUS AND AMALIA
WALLENBERG FOUNDATION

