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The position of "Laudato si" on the environmental crisis in relation to sustainable development and degrowth

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ABSTRACT OF THESIS submitted by:
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Pope Francis' encyclical "Laudato si" is considered one of last year's most relevant international documents engaging the economic, social and environmental crises. By using content analysis of three texts – the encyclical, the Brundtland report and "Degrowth: A Vocabulary for a New Era" - I explored the position of the Vatican in relation to sustainable development and degrowth on issues of population and economic growth, development and application of technology and science, as well as the perceived roots for the environmental crisis.

Lending papal legitimacy to either approach can have far reaching implications for attitudes and policies in predominantly Catholic countries, and beyond. My research concludes that "Laudato si" is more a kin to degrowth than sustainable development on all of the aforementioned issues except population growth. On this subject the Vatican takes a drastically different approach and powerfully asserts the uniqueness of its position.

Similarities between the positions of the Church and degrowth could alter degrowth's currently marginal position in mainstream discourse by advancing it towards the center of today's environmental, economic, social, and political debate. As such "Laudato si" could be viewed as an endorsement of an alternative to the present, growth focused, and capitalist model, aimed at its 1.2 billion followers worldwide. The Vatican calls for a cultural, economic, social and individual conversion that would bring about a redefinition of concepts such as development and well-being in a way that is more a kin to the tenets of degrowth than those of sustainable development.

Keywords: Laudato si, Vatican, Pope Francis, encyclical, sustainable development, degrowth, environment, Catholic Church, religion

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1. INTRODUCTION

In 2015 we have made impressive leaps and witnessed landmark moments within the international environmental discourse. The past year has seen a global consensus on two major documents dealing with the current economic, social and environmental crises as well as a public engagement of all three issues from the Catholic Church. “Transforming our world: he 2030 Agenda for Sustainable Development” (2015) attempted to establish an integrated framework for solutions that could be applied universally, yet flexibly, across the globe - the Sustainable Development Goals (SDGs). The Paris Agreement took on climate change by focusing on greenhouse gas emission reductions and financial aid and involving 177 countries plus the European Union in its voluntary scheme (UNFCCC 2015). “Laudato si” is Pope Francis’ second encyclical. It attempts to frame the first comprehensive stance of the Catholic Church when it comes climate change and environmental degradation while at the same time integrating these issues with those of poverty, inequality and, what he argues is, a deep collective, cultural and individual crisis of modern day men and women (Francis 2015).

“Laudato si” has the potential to influence the attitudes and behaviour of the 1.2 billion Catholics in the world, impact the policy-making process and well as carve out an important place for the Church at the environmental discussion on the international level. Not only does it offer theological guidance to Catholics unsure how to position themselves in the conversation on climate change and environmental degradation, but it also adds to a rather neglected area of Catholic theology – the place of humans in nature. Despite the compounding effects of climate change and intensifying manifestations of other forms of environmental degradation some research shows that, on the whole, a profound and necessary change in individual behaviours and lifestyles has not yet occurred (Millennium Ecosystem

Assessment 2005). People are not living more sustainably, nor do they make a causal connection between their individual behaviour and choices with the environmental crisis in sufficient numbers or degrees. However looking at approaches that are aimed at its sources, rather than simply dealing with symptoms, is becoming increasingly important. It has become more evident in the past decade that, alongside end-of-pipe solutions, human values, behaviours and lifestyles have to become a part of any proposed solution in order to achieve any relevant and lasting results (Gardner and Stern 2002; DuNann Winter and Koger 2004).

A stronger focus on behaviours and the motivations for those behaviours - that partially stem from religious beliefs – is noted both in the SDGs and in the encyclical. As a letter addressed, most often, to all the Bishops throughout the world, an encyclical addresses salient issues that of concern to the Church as well as its congregation. It reflects the formal stance of the Vatican that should be disseminated further. Research has shown that a manner in which the Church's teachings are interpreted and conveyed has an impact on the attitudes and behaviours of the congregation (Woodrum and Huban 1994). It is then important to explore the actual position of the Vatican on the environmental crisis in order to relate it to other approaches that dominate the environmental discourse or try to subvert it.

The SDGs create a common, global framework for action that sets targets but not specific policies in order to allow each country the freedom to implement their own strategies that will lead them to a shared goal. In order to provide such flexibility some vagueness on the hierarchy of the goals and the means to their achievement remains. Within sustainable development itself are many disagreements on its meaning and its aims. At the same time, from a more marginal position, proponents of degrowth reject the international environmental discourse in its present form as well as its obsession with sustainable development and economic growth (Escobar 2014). There are other approaches in between the aforementioned two and outside of their spectrum, however sustainable development is a good point of

comparison because it has, throughout the decades, become the poster child for the environmental discourse on an international level, on which most actors seem to agree. Degrowth, as its critic, offers an alternative conversation on the same issues from a position of an outsider. The Church, wishing a seat at the table, asserts its own, unique position which has the potential to reach a large portion of the global population and influence their views. It is important to see what it brings to the conversation, what sort of action it calls for and where it will find its natural allies. "Laudato si" is in a position to (de)legimitze the currently dominant approach to the environmental crisis in the international sphere in the eyes of a significant portion of the global population and impact present and future, global and national, economic, social and environmental strategies.

Therefore my research tries to understand the position of "Laudato si" on a few selected factors: 1) population growth, 2) economic growth and consumerism, 3) science and technology development and application, and 4) roots of the environmental crisis. I arrive at this understanding through the use of a qualitative research method that enables me to extract and categorize text in order to turn it into data that can be analysed and compared. The method is applied to three texts (two of which are proxies for sustainable development and degrowth) in order to enable comparison and conclusions on the relation of the encyclical to the sustainable development and degrowth approach.

The aim of my research is to clearly identify the position of the Vatican expressed in 'Laudato si' on four selected issues pertaining to the current environmental crisis and compare it with the positions of sustainable development and degrowth in order to evaluate to which it relates more. In order to achieve the above stated aim the following objectives had to be accomplished:

1) To create a framework for analysis that would be applicable to all three documents, and that would follow an environmental logic since my main focus is an

environmental one. This framework would allow for common points of comparison between the texts.

2) To extrapolate the positions of "Laudato si" on the points of comparison by coding its text into categories that reflect both the reoccurring themes of the text and the framework (*a priori* and emergent coding)
3) The attitudes towards the same set of issues will have to be located and extracted from the Brundtland report and "Degrowth A Vocabulary for a New Era" (from now on as "Degrowth") in order to compare the positions extrapolated through 'Laudato si' with those of sustainable development and degrowth.

2. LITERATURE REVIEW

This chapter provides background on the influences of religion on adopting a worldview that is sensitive to environmental issues, and consequently environmentally responsible behaviours. It is my aim to show the relevance of exploring the position of the Catholic Church on the current environmental crisis due to its potential to shape the attitudes and behaviours of its 1.2 billion followers worldwide, as well as the policies of their countries. This was done through the exploration of literature and existing studies dealing with the influence of religious beliefs on human attitudes and behaviour. Furthermore I present a historical overview of both the sustainable development and degrowth approach to the environmental crisis. In order to clearly position the Catholic Church's stance I chose to compare it to the aforementioned two that represent the dominant, mainstream environmental discourse, and the subversive approach respectively.

2.1. The impact of religion on environmental attitudes and behaviours

There has been much discussion on the influence of religious beliefs on behaviour and worldviews of those who uphold those beliefs. Much of the research of the Western Judeo-Christian influence on environmental attitudes and behaviours, and consequently the current environmental crisis, was spurred on by an article of Lynn White Jr. "The Historical Roots of Our Ecological Crisis" (1974) in which he argues that the specifics of a value system, developed within a specific historical context can have a profound impact on not only the social but the natural world. Such is the case with Judeo-Christianism the specificities of which encouraged ecologically irresponsible behaviour and brought about environmental degradation**.** The relationship of human dominion over nature interpreted by the Church from the Bible, specifically Genesis has, according to White (1974), desacralized nature and turned

it into a well of resources to be exploited while humans were taken outside of the natural world and placed above all other living things.

This interpretation of the scripture began to have a more meaningful impact on the natural world once the belief system merged with the modernist worldview and the Western scientific approach (Merchant 2003). A more systematic and sterile exploration of nature devoid of any symbolism that thus far created an overarching framework for man's place in the world strengthened the dominion paradigm in Western societies. The rise of scientific methods of scrutiny, invasion, probing, manipulation and exploitation gave the Judeo-Christian man the tools with which to subdue nature to its will – both in his mind and in the real world – by portraying the world more as a machine to be observed and understood than a creation man was part of (Merchant 2003). The new "ethic sanctioning the exploitation of nature" at the end of the 16th century was built upon a specific type of biblical interpretation and in a moment when that interpretation was being given momentum by use of a newly discovered scientific toolbox (Merchant 2003). This is why for White (1974) "Christianity bears a huge burden of guilt" for the current environmental state and why the solutions that are proposed by our science will not suffice so long as they follow the same rationale of man's domination over nature. The Judeo-Christian man is compelled by his tradition to view himself a master of nature that must be subverted and placed in his servitude (Merchant 2003). It is his right, even a duty to exploit it.

White's account for the sources of the environmental crisis caused many to protest and many to agree with his position. Moreover many more articles were published on the topic in the following decades. The most common critique of White has come in the rejection of what were seen as generalizations. Within the Judeo-Christian tradition Catholics tend to be more aware of environmental issues and engage in pro-environmental behaviour than others whilst

evangelicalism is the least prone to be "environmentally friendly" (Greely 1993; Guth *et al.* 1995). However most research came to conclude that belonging to a Judeo-Christian denomination was not in fact a good predictor, when taken in isolation, of an individual's attitude towards environmentalism (Eckberg and Blocker 1989; Greely 1993; Woodrum and Hoban 1994; Kanagy and Nelsen 1995; Boyd 1999; Sherkat and Ellison 2007). Religious beliefs impacted attitudes and behaviour in combination with other factors. Another issue was the simplification of Judeo-Christianism that ignored the differences between its many denominations. More detailed, quantitative research, has come to differentiate between different denominations and interpretations of the Bible, as well as the influence of regular church attendance, individual relationship and image of God, political orientation, education, gender, social status etc. as relevant variables that need to be taken into account (Eckberg and Blocker 1989). Shekart and Ellison (2007) argued that belonging to a Judeo-Christian tradition was connected to higher levels of private, individual, environmental activism and with lower level of public, political environmental activism.

Perhaps the most important oversight of White's is the assumption that the power of the dominion paradigm over the stewardship one in the tradition (1974). Woodrum and Hoban (1994) have shown that dominion beliefs are prevalent among those who are not well informed about environmental issues nor educated however they are not to be identified with religiosity by any account. Moreover on an individual level religiosity did not predict a dominion perspective, nor was there an indication of any resistance to the stewardship paradigm after it was introduced through appropriate channels (Woodrum and Huban 1994). Shekart and Ellison (2007) specifically show that belief in the inerrancy of the Bible and church attendance often supported the stewardship paradigm. Especially in Catholicism the stewardship belief is strongly supported through accents on Christ's behaviour and an ethic of

responsibility and humility (Sherkat and Ellison 2007). It would be a grave mistake to equate the Western religious tradition with the dominion belief without recognizing those who have nurtured the Christian tradition for man's stewardship over nature. Another thing that should be avoided is ignoring the role of non-religious factors (e.g. political attitudes) since, more often than not, it is their interaction with religious beliefs that forms individuals' worldviews and behaviour (Eckberg and Blocker 1989).

However White (1974) never argued that Christianity was unable to reinvent its approach to the nature-man relationship. On the contrary, it was his aim show that religious beliefs can have a strong impact on environmental attitudes. The sanctification of Francis Assisi shows that an opening exists for a new, environmental theology. The teachings that consider man to be part of God's creation, destined to live among other living beings with which he was equal offers stewardship as an alternative to the dominion belief in which man is the master and exploiter of nature (Glacken 1970; Shaiko 1987). White (1974) sees this approach as an injection of democracy into a man ruled "monarchy over creation". Even though stripping nature of its spiritual significance has been an unfortunate historical consequence of a specific set of conditions in the Catholic West, in the previous decades more accent has been given to the stewardship approach to God's creation by the Catholic Church. This position was asserted in Pope John Paul II's address for the celebration of the Word Day of Peace in 1990 where he called for behavioural and structural change in our relationship to the environment as a duty to God who "saw that it was good" and thus expressed the intrinsic value of nature as His creation (Gen 1-3) (John Paul II 1990). Despite the fact that man is separated from the natural world by possession of a soul God is the creator of both and as such he limits the extent of human dominion over the nature and includes in it a dimension of responsibility (Peterson 2003).

It is no coincidence that St. Francis is the central figure of Pope Francis' encyclical "Laudato si: On the Care of Our Common Home". His actions and teachings offer a new, or at least a renewed prism through which Catholicism can reinvent itself in lieu of the current socio-economic and environmental crisis that threatens humanity. However the encyclical is peppered with many other figures and precedents that support a stewardship relationship between man and nature. Another factor which makes the research of the encyclical's position relevant is the timing of its publication. The document anticipated the confirmation of the 2030 Sustainable Development Agenda as well as the Paris Agreement of COP21. As such it sought to be prepare world's 1.2 billion Catholics for the increasingly present global discussion on the economic, environmental and social crises and arm them with a moral framework and vocabulary in dealing with these issues. At the same time the encyclical served as to reaffirm the Church's place at the table as a relevant party whose contributions should be considered due to its mobilizing power and importance. Since the present discourse has created a context that is more favourable for engaging issues of environmental protection, a sanctioning attitude of the Vatican towards sacrifices that must be made in order to achieve this enormous task could prove to be a tipping point in the discussion that allows for much wider support on the ground. According to White and subsequent research that he inspired not only do religious traditions have that power, but they have a duty to use it.

2.2. Sustainable development

Sustainable development is a concept that has ignited many debates and influenced the international discourse on environmental protection, climate change and Third world development a great deal. Its abstract nature can be attributed to the difficult conditions in which the term was coined and the purpose it was meant to serve – to bridge the gap between the North's environmental concerns and the South's developmental aspirations (Najam 2005).

As a compromise of sort it managed to get everyone to the table by promising not to stunt development (which includes economic growth as a crucial component) and only requiring that it make room for environmental long term planning (Brundtland and WCED 1987; Ozorio de Almeida 1972**).** Throughout its life span it has undergone many semantic changes and expansions; however the mainstream interpretations of sustainable development have all maintained economic growth as a crucial tool for tis attainment. As it was presented through the different Development Decades of the UN, the MDGs and currently the SDGs sustainable development is not focused on what is behind the growth stage of the global economy, it does not yet imagine an economy and society of full maturity, after growth is over. The UN defined development as "growth plus change", thus the current paradigm is to sustain economic growth and enable a socio-economic development whilst not doing irreparable damage to the environment (Assembly 2015; Brundtland and WCED 1987; Ozorio de Almeida 1972). The possible conflicts that might arise amongst these three components – the social, environmental and economic – are not seriously discussed within the discourse and only come from outside critics of the entire concept sustainable development (Hediger 1999).

2.2.1. A history of an international compromise

Sustainable development as a concept is mostly attributed to the UN-sponsored World Commission on Environment and Development report "Our Common Future" published in 1987. However the theoretical foundations for the concept, according to Desta Mebratu (1998) can be traced back to the late eighteenth century and the works of Thomas Robert Malthus and David Ricardo (Mebratu 1988). Both, in their own way, introduced the idea that economic growth, population size and well-being are related and constrained by ecological limits.

Sustainable development as we know it today emerged from the preoccupation of the UN with development. Gabrielle Koehler (2015**)** claims that development is an inseparable part of the UN's viewpoint influenced by the experience of Great Depression and Second World War. The newly formed UN sought to enable and maintain three goals: long lasting peace, economic stability and human well-being (Koehler 2015). At this time development was equated exclusively with economic growth, technology advancement and productivity. This approach persisted for the decades that followed despite the many changes that occurred within political and economic systems of member states and the international system. The expansion of UN's membership to previously colonized countries strengthened the organization's focus and commitment to the economic development of underdeveloped as well as developed countries in the First Development Decade (Koehler 2015). In the following, Second Development Decade, the goal of macroeconomic growth was reaffirmed alongside the goal to achieve greater human well-being (Koehler 2015). In that period a strong environmental movement in the US re-emerged, spurred on by the intensification of visible side-effects of pollution (such as the Cuyahoga river catching on fire and decreased quality of air in many cities like Los Angeles and Denver), advancement in technology, media and communication (Ruckelshaus 1985). Development was at the core of UN discourse and action, however the environmental concerns of the time were considered as a separate issue that worried only a specific stratum of countries mainly in the global North.

The integration of development and environment concerns began in a report produced as part of a preparatory process for the United Nation's Conference on the Human Environment (UNCHE) that was held in 1972 in Stockholm, Sweden (Najam 2005). The Founex report was written by the intellectual elite of the global South in an attempt to thwart what the developing countries saw as an attempt to place environmental concerns above those of underdevelopment and poverty on the international agenda (Najam 2005). The emerging

international environmental discourse was seen as a threat to the goal of the global South – achieving a level of economic development like that of the North – insofar it would direct attention, aid and technology away from issues of poverty. With the Founex report, published in 1971, the South recognized that unregulated economic development can have a negative effect on the environment however in the case of underdeveloped countries environmental degradation was presented as a consequence of lack of economic growth (Ozorio de Almeida 1972). The mainstream view of environmental problems as consequences of development was placed on its head and development in the context of developing countries is seen as a solution, rather than a cause. Therefore the report states that "the concern for the environment must not and need not detract from the commitment of the world community – developing and more industrialized nations alike – to the overriding task of development of the developing regions of the world" (Ozorio de Almeida 1972). In other words, not only must the need for the South to develop not be overshadowed by environmental concerns, environmental problems can be solved through development.

If both the North and the South were to have what they wanted development would need to be redefined - the term would need to be formally broadened in order to encompass new dimensions that go beyond the narrow scope of economic growth. The inclusion of social, cultural and environmental dimensions into the concept of development became crucial since "high rates of economic growth, necessary and essential as they are, do not by themselves guarantee the easing of urgent social and human problems" (Ozorio de Almeida 1972). Moreover, it was noted that in a great number of countries economic growth has not solved problems of unemployment, extreme poverty and socio-cultural unravelling of communities (Ozorio de Almeida 1972). This explicit formulation of the common mistake of equating development with economic growth was an important stepping stone towards the foundational postulate of sustainable development as we know it today. The concept of

development had begun to expand in a way that reflected an affirmation of its social, cultural and environmental dimensions (Ozorio de Almeida 1972). The development policies were expected to follow suit and broaden their scope. The Founex report managed to keep issues of development a priority on the international agenda while recognizing the need for environmental consideration as an afterthought. It is no surprise than on the latter their impact left something to be desired.

The same year of the UNCHE the Club of Rome took serious interest in the growing environmental crisis and published 'Limits to Growth'. As the name indicates, the book showed the vast potential of a growth focused society to surpass the planet's carrying capacity in a matter of decades (Mebratu 1988). A concern for sustainability of our economic system became more salient than ever before. The theoretical foundations of sustainable development were growing, but development and environmental protection continued to be at odds with each other. These tensions were further aggravated by the oil crisis in 1973 and the global recession that followed. Efforts had turned away from the incorporation of the environmental, social and cultural dimensions into the development process and its policies (Koehler 2015). The road to politics of sustainable development was long and winding, and the seventies were only its beginning.

The actual term as we know it today first emerged in the subtitle of the World Conservation Strategy published at the beginning of the Third Development Decade by the International Union for the Conservation of Nature once again bringing development and environment issues into the same discussion (Mebratu 1988; Reid 1995). However sustainable development only rose to prominence a few years later, more specifically in 1987, when the UN-sponsored World Commission on Environment and Development (WCED) published the "Our Common Future" report, also known as the Brundtland report (Carvalho 2001). It was there that sustainable development took its most recognizable form -

"development that meets the needs of the present without compromising the ability of future generations to meet their own needs" - and set the stage for all future debates on the subject (WCED 1987; Mebratu 1998). The report connected environmental degradation and economic growth concerns with the need for rational and efficient resource use. Environmental improvement was linked to an eradication of poverty by measures of sustainable economic growth that would be sensitive not only to inter but to intra-generational equity (Mebratu 1998). There was another attempt to reformulate UN's development policies - most often reduced to only economic growth - to include a social and environmental component. The report was proof that the Founex report, as well as the shift in economic paradigm due to unforeseen recession had a strong impact on the global environmental discourse (Najam 2005). Even though environmental concerns were firmly incorporated into the development discussion economic growth was still firmly at the centre of the agenda. What made sustainable development substantially different from development as UN approached it in the previous decades was a formal recognition of the need for an integrated approach.

The Brundtland definition seemed to pose as many questions as it gave answers because of an inherent contradiction ingrained in the term. This contradiction has proven difficult to resolve to date (Carvalho 2001). The two main components of the definition – the economic one of fulfilling present and future needs and the environmental one of ecological limits – seem to come very easily at odds (Mebratu 1998; Carvalho 2001). However the vagueness of the term proved useful as an open invitation to multiple stakeholders in both the global North and South to come together over these pressing concerns. "Our Common Future" succeeds in providing a definition of the concept while leaving it open to multiple interpretations and consequently conflicts.

Despite some of its internal incoherencies, the propagation of the relevance of sustainable development on a global scale went on unhindered. The UNCED in 1992 opened the sustainable development discussion up to all interested stakeholders (Mebratu 1998). A concern for environmental degradation, that was only a few decades earlier confined to the upper middle class and politics of the global North, had now taken on a form that was acceptable to a much wider national and international audience. Not only were developmental and environmental concerns inextricably linked within this new discourse, the Rio Conference opened the doors to issues of applicability and implementation as well as established the legitimacy of the global environmental discourse and governance system - especially in the South (Najam 2005).

Major shifts in the political and economic context in the nineties allowed for an increase in the volume of drastically different interpretations of sustainable development, and policies placed under its umbrella. The end of the Cold War, a dramatic increase of independent states as international actors, rise of corporate interests, an increase in inequality ushered in an era of the neoliberal economic paradigm of development which, once again, changed the meaning attributed to the term in the global environmental discussion (Koehler 2015). The Development Decades were succeeded by two Poverty Eradication Decades that focused mainly on ensuring employment, the latter of which overlaps with the fifteen year period of the Millennium Development Goals (MDGs) of 2000.

Out of eight MDGs one aimed at "ensuring environmental sustainability" (UNDP 2016). Koehler (2015) argues that the goals are undeniable proof of a conceptual shift in the sustainable development discourse, while others (Fukuda – Parr 2010) criticized them for being a façade that enabled a purely neoliberal global agenda to progress unhindered. Those less critical of the project would, with hindsight, argue that the MDGs failed to be comprehensive and equitable (PBSO UN 2012). The eight goals were considered, planned for

and measured in isolation and with hardly any consideration for how they would affect each other. The conception phase of the process was of a closed nature and created an impression of a "donor-centric agenda" (PBSO UN 2012). In other words the MDGs were created in a top-down process - it was an agenda aimed strictly for the developing world, measured and scrutinized by the developed while the result has been uneven across countries and across goals (Koehler 2015; Sachs 2012). Some, like David Hulme (2010), argue that the MDGs remained of limited influence over actual policies because powerful state actors in the negotiations ensured the "centrality of income growth to poverty reduction and that the variant of human development the MDGs pursued was based on a basic needs approach and not human rights or reduced inequality". However, others, like Margot Salomon, believe that the goals never stood a chance since they embodied a frail "humanitarian project" in a hostile world focused on profit and economic growth (Salomon 2008). As such environmental sustainability was mentioned, but not actually engaged, because the world and the MDGs still had their sights set mainly on poverty and saw rapid global economic growth as the best way to eradicate it (Sachs 2012).

A new opportunity for a conceptual shift presented itself again in 2014 in lieu of preparation for the post-MDG period that was to be followed with a new set of global goals. The conception process was opened up and the scope had widened and the goals, of which there were now seventeen, were more focused on environmental concerns (Koehler 2015). Four goals are unequivocally environmental, dealing with climate change, aquatic and terrestrial ecosystems and clean water (UN 2016). Many others can be traced back to the environmental crisis in one, short step. Exacerbated by severe natural disasters and extreme economic losses, issues of climate change have become the centre piece of the international agenda in the last few years which is clearly reflected in the 2030 Sustainable Development Agenda.

What the MDGs lacked in comprehensiveness and integration the Sustainable Development Goals are trying to remedy by accentuating the interconnectedness of all the seventeen goals and requiring that developed countries suit up as well. Conceptually the SDGs have managed to achieve wide consensus on the next fifteen years of sustainable development. However imagining the goals as a set of comprehensive policies has yet to be successful (Koehler 2015). There exists a tendency in the 2030 Agenda for Sustainable Development (2015) to address the SDGs as indivisible which means that trade-offs that will have to be made between them are not being discussed. Avoiding dealing with the problem of trade-offs is done by leading two parallel conversations – one on environmental protection and the other on economic growth - and loosely connecting them to each other via win-win solutions often founded upon currently non-existent technology (Hediger 1999). The silence on the inherent conflicts between some goals and freedom, that allows each country to choose the means of achieving the 169 SDG targets, creates an inevitable situation in which culturally acceptable hierarchies of goals will be established and unavoidable trade-offs made but not disclosed. The problem of clarity when discussing sustainable development was not yet weaned out. It emerged once more, not only on a theoretical but also the national and international policy levels.

2.2.2. The proliferation of interpretations and the role of growth

What has taken root in discussions on sustainability is the dichotomy of "weak" and "strong" sustainability "that are either grounded in on an ethical premise of keeping the general production capacity of the economy constant, or maintaining essential functions and capacities of the environment intact over time" (Hediger 1999). More specifically it is the former that aims to protect the resource base and ecosystems in order to ensure growth, while the latter places more emphasis on long-term environmental preservation than levels of

economic output. This binary opposition clouds over most of the conversation around sustainable development and, more recently, the SDGs. Despite the fact that they are an internationally agreed upon manifestation of sustainable development, it does not mean everyone has come to an agreed interpretation of the term. The open character of the goals shows us that in fact there are still many directions each country can take their sustainable development and that for each of them the finish line might look a little different. However, globally we have set solid and clear aims for ourselves. The lack of discussion on policies and implementation leaves the question of 'how is sustainable development to be achieved?' unanswered (Koehler 2015).

Sustainable development with its ethical, social and ecological component was intended to be revolutionary in terms of our relationship to nature and to each other, especially when mediated by economic processes (MacNeill 2006). The guidelines presented in the Brundtland report were meant to further elaborate on and direct global sustainable development in the right direction. The aim was to create a framework within which economic and social development could continue, albeit within ecological limits of any given time that were by no means considered absolute. However the three dimensions were still left rather vague (Mebratu 1998). This has enabled a notable proliferation of interpretations that claim to maintain the WCED definition at their core. Even today the term seems to allow for moulding depending on the context in which it finds itself and the background of the actors that use it (Redclift 2005).

Since its conception development has been focused on health, wealth and literacy, or lack thereof (Daly 1993). The UN Charter identifies certain levels of economic growth as a central indicator of development and an enabler of global peace, well-being, economic stability and environmental protection (Koehler 2015). With the penetration of the neoliberal paradigm in

developmental policies and the emergence of "a new international economic governance" growth took on an even more important role (Jomo 2006). Thus the Brundtland report unequivocally holds a five to ten fold growth of the global economy as a necessary part of achieving sustainable development on a global scale (Brundtland and WCED 1987). In it there is no recognition of an inherent conflict between continuous growth of industrial output and the preservation of ecosystem health – growth is necessary. It is the quality of economic growth, how it is managed, and how its "irreversible adverse impacts" are minimized that will have a positive or negative environmental effect (Brundtland and WCED 1987). "Our Common Future" (1987), as an anthropocentric work, acknowledges the priority of development (and economic growth as its motor) but asks of it to pay more attention to its environmental effects because it recognizes man's embeddedness in nature.

The current embodiment of sustainable development – the Sustainable Development Goals –has tried to expand on the notion of development by formally acknowledging its economic, social and environmental dimensions (Assembly 2015). The more comprehensive framework spans from the usual suspects of such as poverty and economic growth, but also includes responsible production and consumption, innovation, and climate action. Despite the seemingly greater accent of the SDGs on achieving Herman Daly's idea of development as a qualitative improvement, economic growth is still a very big part of the process (1971; 1974; 1990a; 1990b; 1993; 1996; 2007). Two of the "five big transformative shifts" that form the conceptual foundation for the SDGs are sustainable development and inclusive growth. Even though sustainable development and sustainable growth are not used as synonyms, the former is deemed impossible to achieve without the latter (UN 2013). It is at this point where Daly and the mainstream conception of sustainable development part. It was his contention that development can occur without growth and vice versa (Daly 1990a; 1990b; 1996; 2007).

However the 2030 Agenda for Sustainable Development explicitly states that neither developing nor developed countries need to stop growing due to present and predicted innovation that will make trade-offs between economic growth and environmental sustainability unnecessary (UN 2013). In the entire document economic growth, and GDP growth specifically, is explicitly endorsed on multiple occasions and one of the SDGs is dedicated solely to it. An overview of the most prominent documents dealing with sustainable developments exposes ways in which its foundational tenets would not be considered as leading the world towards neither sustainability nor development by many ecological economists. If taken in its present state, sustainable development would be judged harshly because through the lens of ecological economics it can hardly be interpreted as anything more than an attempt at "environmentally friendly economic growth" (Bluhdorn 2007).

2.3. Degrowth

In the words of Serge Latouche (2004; 2010**)** degrowth is not a concept, nor a concrete project, rather it is "a term created by radical critics of growth theory, to free everybody from the economic correctness that prevents us from proposing alternative projects for post-development politics". More specifically it is an attempt to change the way we view the world and how we understand progress – something Latouche (2014) calls "a decolonization of the imaginary". A term elusive to definition, self-proclaimed as a conglomerate of movements that seek abandonment of economic growth as society's goal, can be difficult to pin point, compare and contrast. However the amount written on degrowth has increased in the last decade which makes its delineation somewhat easier. There are two ways to go about drawing boundaries around this "political slogan with theoretical implications" (Latouche 2010). Firstly, we can explore the history of the term - how it came to existence, within what context

and with what purpose. Secondly, we can explore its unique positions that separate it from other approaches in the field.

2.3.1. A history of the modern opposition to the growth imperative

The actual term 'degrowth' is a literal translation of the original, French, term '*decroissance'* created by Andre Gorz in the early seventies when he posed the question "Is the earth's balance, for which no-growth – or even degrowth – of material production is a necessary condition, compatible with the survival of the capitalist system?" (as cited in D'Alisa 2014). It was the same year that Limits to Growth was published and the Vice-President of the European commission, Sicco Mansholt, asked the President publicly to think about abandoning growth (Latouche 2010). At the same time a Romanian American mathematician and economist Nicholas Georgescu-Rogen published "Entropy Law and the Economic Process" in order to point out the flaws within economic models that ignore the second law of thermodynamics and pay no attention to ecological limits. Thus he put forward the conclusion that even with no growth, at current rate of depletion, scarce resources would disappear (Kallis *et al.* 2014). Thus not only was this a warning against growth, but a clear statement that no growth would not be enough to preserve the resources we have come to depend on. Georgescu-Rogen engaged the ideas championed by the Club of Rome as well as Daly's proposition of the SSE in the following years becoming a foundation builder for what is today known as ecological economics (1971; 1974).

It was not until 2001 the debate on degrowth took on its other major characteristic – its criticism of what was considered to be a hegemonic idea of sustainable development (Kallis et al. 2014). The early 2000s have seen three decades of the sustainable development project materialize in more or less identical policies that yield no results. The avocation fir "an equitable downscaling of production and consumption" became louder due to what was seen

as a more-of-the-same approach to the growing economic, environmental and social crises. Latouche argues that the parents of degrowth were the awareness of the intensifying ecological crisis on the one hand and the criticism of development on the other (Latouche 2010; Alier *et al.* 2010). The former can then be linked to Georgescu-Rogen, Club of Rome, Gorz and Daly while the latter is closer to the likes of Marshall Sahlins and Ivan Illich and their critique of development which seems to limit humans' autonomy and increase "illth" of institutions and of individuals (Martinez-Alier *et al.* 2010; Daly 1996). The problem is not only in the political and socio-economic system we have at present, but the one we are heading towards through the paradigm of sustainable development which runs the risk of delivering growth for its own sake but under the guise of development for everyone's sake. The alternative of degrowth calls for an investigation into the true nature of the dominant economic paradigm of the global economic system and an establishment of new social ideals (Martinez-Alier *et al.* 2010). As such it respects cultural diversity and historical influence of context in which a vision of a good life can differ greatly from one place to another. However if development is an engine for a preservation of one hegemonic economic ideology – that of growth – and it reaches every corner of the Earth, shapes the institutions and practices of each developing country through its policies and influences imaginaries such diversity of values ceases to exist. The only choices that can be made are those available within the capitalist consumerist framework. For degrowth the solution to the innate oxymoron of sustainable development can only be resolved if development was not only decoupled from economic growth, but associated with dramatic economic downscaling, especially in the economies of the global North (Martinez-Alier *et al.* 2010).

Reading of degrowth literature reveals its position as a consequence of an evolution in relation to other emerging and widespread approaches to social, economic and environmental crises of the time – more recently sustainable development and its attempt at a compromise

between economic growth and environmental protection. Another important rift between the two is the assertion of degrowth that there exists a hegemonic paradigm – an "economic correctness" - at work that has silently enslaved our imaginary and confined it within its boundaries (Latouche 2014). Understanding problems and imagining solutions is strictly defined by the often invisible framework established by the dominant ideology at work. Currently most discussions on environmental issues tend to avoid engaging the imperative of growth and exploring the potentially unresolvable conflict between it and preserving the environment and our resource base. An increase in well-being has been linked to an increase in GDP for decades and sustainable development has done little to change that despite the fact that it has aimed at expanding the meaning of developed to include more than just economic considerations (Brundtland and WCED 1987). The three pillars of sustainability include the social and the environmental however the exploration of tensions between them is still superficial. These main issues, the causes and enablers for the perpetuation of the current crises, according to degrowthers, have not still been addressed because addressing them would mean an unavoidable realization that the existing system cannot simply be tweaked, its very essence has to change and consequently it must cease to exist (Kallis *et al. 2014).* In other words "economic growth even disguised as sustainable development will lead to social and ecological collapse" (Martinez-Alier *et al.* 2010). In this way degrowth is subversive, while sustainable development aims to find ways to maintain what has already been established through mitigation and adaptation.

2.4. Conclusion

This chapter presented literature dealing with the impact of religious beliefs, especially Western religions, on the natural world through the values that they promote and behaviours they approve or condemn. Much conducted research, inspired by Lynn White Jr., has shown

that religious belief, although not the sole factor, do impact individuals' attitudes and behaviours to a significant degree (White 1974; Eckberg and Blocker 1989; Sherkat and Ellison 2007). Thus it becomes relevant to understand what attitudes and behaviours a religious tradition advocates, especially if it has 1.2 billion followers and a strong cultural influence over institutions and policies in a large number of countries where they constitute a majority of the population. Catholicism is one such tradition and it has actively joined the international, environmental discussion. The contribution of Pope Francis is important to understand in order to see if the Catholic Church endorses the currently dominant approach to the economic, social and environmental crisis – that of sustainable development – or if it rejects it joining the ranks of degrowth in its attempts to alter the logic of the entire discourse. It is undeniable that "Laudato si" presents its own, unique interpretation of the crisis and presents its own set of unique recommendations, however the degree in which it relates to sustainable development or to degrowth will make a significant difference in the shape of the future environmental discourse.

3. THEORETICAL FRAMEWORK

This chapter provides an insight into the framework which was created for my research in order to facilitate the comparative analysis between the three texts. When examining 'Laudato si' in order to position it properly in relation to sustainable development and degrowth it was necessary for me to distil the entire document into a few, workable positions on crucial, reoccurring concepts in the discourse. These concepts had to be occurring in all three objects of my analysis so they could be compared to each other, but they also had to have relevance for the environmental discourse. The Brundtland report, the degrowth glossary and the encyclical are not solely environmental literature. Their approach to environmental issues is an integrated one that pays respect to a systems way of thinking about the economy, society and the natural environment. Moreover it is necessary to note that each of the three has its uniqueness and penetrates topics and spheres not covered by the other two. This is a consequence of a combination of things one of which is the different context in which they were written, the different authors and perhaps even different targeted audiences. It is because of these differences that a construction of a 'one size fit all' framework was important.

When looking for a starting point I chose to take the IPAT equation because it is an extremely succinct depiction of what could perhaps be the most important variables that interact to create a positive or negative environmental impact. The equation dating to the work of Paul Ehrlich's work "The Population Bomb" in the late 60s expresses a seemingly simple proposition that environmental impacts are a result of the interaction population, affluence and technology (Chertow 2001).

$$I = f(P, A, T) \qquad \text{Impact} = f(\text{Population, Affluence, Technology})$$

According to Marian Chertow (2001) the three variables were originally thought of as areas which had extremely high degree of negative externalities, thus increase in population, use of technology and growth of affluence were considered to be unsustainable in the sense that they had a negative impact on the environment. However, throughout the decades the discussion shifted. The variables that had previously been considered as contributing to environmental degradation were conceptualized as areas in which, with some innovation and management, most improvements could be made and sustainability achieved (Chertow 2001). This shift was simultaneous with a wider change in public and environmental sentiments, especially towards technology and technological solutions (Chertow 2001). After what can only be described as a 180 degree turn, the public and a sizeable portion of environmentalists exchanged fierce criticism of technology use at home and in the economy for techno-optimism (Chertow 2001). The new attitude deemed technology innovation to be perhaps the best way to approach environmental and economic crises since it was one that felt most under our control. The IPAT equation quickly started to mean something entirely different than what was the original purpose (Chertow 2001). Despite these fact that the equation as a whole and its parts individually underwent multiple re-interpretations it manages to encompass, albeit somewhat roughly and at a highly abstract level, the key concepts involved in the current environmental and development discourse – affluence, technology and population. Since the discussion on the role and impact of each variable is still ongoing this framework appropriately reflects the points of disagreement and variation between sustainable development and degrowth as well as the encyclical on each of them.

In its six chapters ‘Laudato si’ engages multiple dimensions of the environmental crisis - its roots, the role of population growth, the current global economic system and its focus on economic growth, as well as the impact of our attitudes towards technology. My framework, that allowed me to extract what I will call the pillars of the current environmental debate, was

loosely based on the IPAT equation in the sense that it directed me towards exploring the position of the encyclical, the Brundtland report and the degrowth glossary on three key topics: 1) role of population growth (P), 2) role of economic growth and consumerism as one of its main engines (A), 3) role of science and technology (T). However my in depth reading of the literature revealed that I should expand the three-dimensional framework for comparison with an exploration of what each object of my analysis believes are the roots of the environmental crisis.

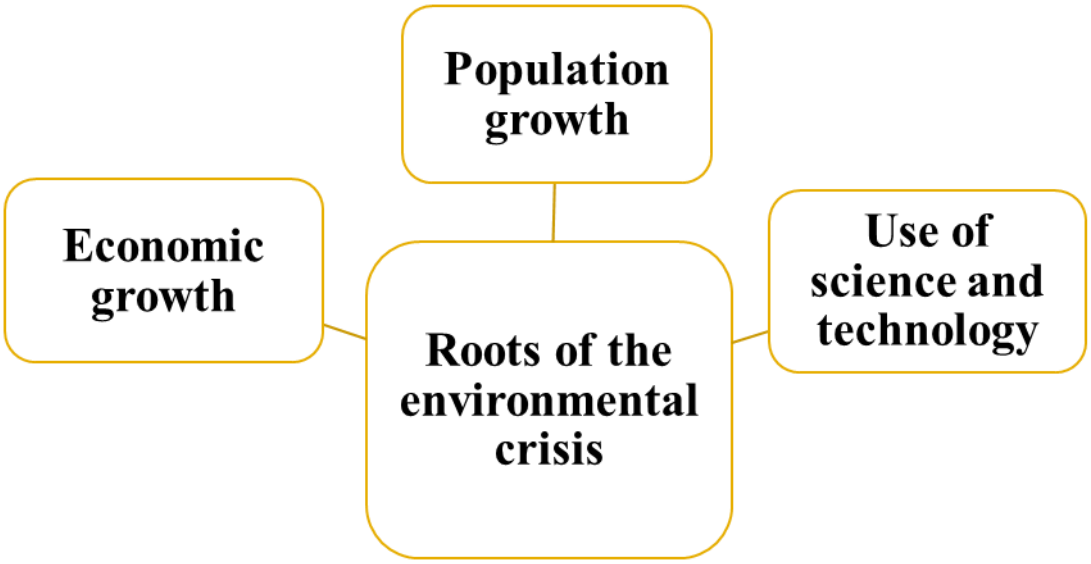

Figure 1 Framework for analysis

4. METHODS

In order to answer my research question I needed to extrapolate the position of the Vatican on the aforementioned four issues from the text of the encyclical. An application of a qualitative method was most appropriate for achieving my aims and objectives sine they require an accurate analysis and interpretation of texts. The method that was chosen was applied to not just "Laudato si", but two other texts I chose as proxies for sustainable development and degrowth on the basis of their characteristics. The qualitative analysis of all three is necessary in order to compare the three approaches to the current global crises and see where they overlap and where they differ.

4.1. Choosing the proxies

4.1.1. Brundtland report as proxy for sustainable development

In order to adequately position the core concepts I extrapolated from 'Laudato si' in comparison to those of sustainable development and degrowth it was necessary to precisely define them in all three cases. The extrapolation process was simpler in 'Laudato si' since it was not needed to look for its position outside the document itself. However, due to the vast array of literature written on the subject of sustainable development I found it necessary to focus my analysis on one document that would serve as a legitimate proxy for the concept. For the purposes of my research I chose to look for positions on the roots of the current global crises, population and economic growth, technology and proposed solutions in the elaborate 300 page report that is most commonly taken as the corner stone of sustainable development – the Brundtland report. An overwhelming majority of sustainable development literature draws on the sustainable development definition from 'Our Common Future' and uses it as a starting point for further expansion of, discussion on and engagement with the concept.

The limitations of this approach are evident since it freezes sustainable development in a specific moment, one rather far from the present one, and ignores what was added and subtracted from it throughout the years. It ignores the possibility of significant evolution of sustainable development and its positions influenced by thirty years of change in context, trial and error as well as theoretical and practical engagement. It also treats the sustainable development body of thought as monolithic, without separating strands, dissident lines of argumentation and reinterpretation. However the Brundtland report is still considered an extremely relevant document for the concept of sustainable development and the positions stated in that document are still considered as its basic tenets.

4.1.2. "Degrowth" as proxy for degrowth

The degrowth discourse doesn't have an equivalent of the Brundtland report, and much of the literature written is disjointed and spread across disciplines. However in 2014 a glossary of degrowth was published that included essays written by the majority of living, relevant authors on the subject, and covered a comprehensive list of terms and topics relevant for the discussion. "Degrowth" strives to introduce the current structure of the body of thought as holistically as possible in order for it to actively engage the current issues of development and environment. As such I considered it the best available lens through which the concepts extracted from 'Laudato si' can be examined.

4.2. Choice of method

The field of qualitative research is vast and much literature exists on a wide array of approaches which made the selection of an appropriate method more daunting. However the choice was made easier by the restrictions placed on me by the object of my investigation. Since I wanted to explore written documents – an encyclical and a report – I looked further

into different types of document analysis. I found that content analysis was most appropriate approach to my research because its procedures lend themselves to adaptation in a particular context. It provided me with a systematic procedure and specific tools with which I could examine both "Laudato si", "Degrowth" and the Brundtland report because it made it possible to "distil words into fewer content-related categories" that would correspond and be comparable between the three works (Elo and Kyngas 2007). It also allowed me to combine two different types of coding – emergent and *a priori* in order to achieve the best possible categorization of my data (Stemler 2001). However, literature on content analysis did stress the difficulty of the method for less experienced researchers since "it does not proceed in a linear fashion and (…) is less standardized and formulaic" which makes it malleable but also more susceptible to misuse (Elo and Kyngas 2007). Reporting of results can be especially challenging since the analysis process is individual and depends in large part on the researcher (Elo and Kyngas 2007). That being said there are multiple ways in which this can be minimized, some of which I was able to apply to my work and will elaborate on later in the chapter.

4.2.1. Coding

Content analysis should start with deciding on coding units and my research objects lent themselves to syntactical definition which means what was coded, categorized, were sentences and paragraphs extracted from the texts **(**Stemler 2001). Directed content analysis allowed me to engage the three texts with already existing categories, or codes. This was done through a categorization matrix - a set of preexisting codes – which I had created at the very beginning of designing my research (Elo and Kyngas 2007). The categorization matrix was based on the image of the IPAT equation and the categories, or codes, were chosen because of their relevance to the research question and to all three objects of analysis. This facilitated the

processes of interpretation, comparison and analysis (Hsieh and Shannon 2005). While reading the texts I kept the preexisting codes in mind and sorted the coding units accordingly. However I chose not to depend solely on the directed approach, but to use it as a backbone to my research. It was important for me to keep the scope flexible so as to be able to incorporate new categories that emerged naturally, through multiple reading sessions of the documents. Certain themes were reoccurring and presented themselves as relevant across the board which meant that they could be used as points of comparison and analysis between the texts. With the predetermined codes I would highlight sentences and even entire passages that could be coded as positions on population growth, economic growth and use of technology. The additional category I chose to incorporate in my research emerged from this very process. This reoccurring, relevant theme that was not described by my predetermined framework was given a new code and grouped as such. The first step was then to come up with a complete and satisfactory categorization of themes which would allow me to organize the extracted quotes and turn them into data. The three predetermined categories proved very useful and applicable as they appeared in all three texts as general themes. In the final readings I tried to ensure my categorization of textual data was accurate and that nothing had been left out or mislabeled. This phase allowed me to make the roughly constructed categories more refined and properly engage in passages that could be placed in more than one category at a time, or those that seemed to be contradicting to other passages in the documents. The reading of each was repeated until I was satisfied that I had properly classified my data and extracted all the relevant points of comparison between them.

At the end of my reading I had extracted the data from all three documents and organized it in five tables corresponding to the five coded themes: 1) role of population growth, 2) role of economic growth, 3) role of scientific innovations and application of technology, and 4) roots of the environmental crisis. Once my data was organized within the

four categories I began a new series of readings and coding in order to create subcategories within each given category. Having my data organized in such a way – broken up in smaller yet logically consistent pieces – allowed for a simpler comparative analysis of the text. Once the data was coded according to the expanded general categorization matrix that was made separately for each text it was possible to analyze the data and discern each position on each of the explored concepts (represented by each category).

4.2.2. Comparative analysis of extrapolated positions

Extracting coding units and categorizing them in the four categories and multiple subcategories from all three texts enabled me to interpret, code and compare them. This comparative procedure allowed me to properly place the positions of "Laudato si" on each of the four aforementioned concepts in relation to the positions expressed by sustainable development and degrowth. The comparison does not assume that the positions of sustainable development and degrowth are two extremes. The discussion that follows the presentation of data in narrative form provides an insight into the nuances between the three positions on each subcategory and facilitate the positioning of those expressed in "Laudato si" in relation to the other two approaches. Positioning through comparison allowed me to evaluate which perspective it has more in common with rather than claiming it matches perfectly to one or the other. After repeating the same comparison with all four pillars it will be easier to judge the relationships between the expressed positions in "Laudato si", the Brundtland report and the degrowth glossary.

4.3. Limitations

Originally the research envisioned combining document analysis with the analysis of interviews with selected parties who were involved in the process of formulating "Laudato

si", however this proved to be unfeasible within the time constraints of the project, thus I confined my research to document review. This made ensuring credibility trough triangulation difficult, however I employed other techniques which allowed for a rigorous process of data collection and analysis. Michael Quinn Patton suggests paying attention to the integrity of the data by keeping it in context during the interpretation phase (Patton 1999). Discrepancies as well as conflicting data were documented and will be presented as well as possible alternative and rival explanations explored (Patton 1999). Berg recommends a minimum of three pieces of affirming data per interpretation thus for each of the four 'IPAT' categories I provide multiple evidence to ensure trustworthiness (Berg 2004).

Another limitation in my research design is the lack of a second coder. In content analysis it is recommended that the objects of analysis are coded in two instances by independent coders that would then compare their results and work out any discrepancies. This was not possible in my research which means that there does exist a slightly higher chance of bias, albeit an informed one. There was also no audit process in the research that would serve as another check for bias.

My own position could be considered a limitation if it was not explicitly expressed and if as many measures as possible were not taken during the analysis process to ensure objectivity. However in qualitative analysis it is unavoidable fact that the researcher becomes part of the data thus it is important to state that my interests lie in the opportunities degrowth can open for the pending engagement of social, economic and environmental issues that have not been supplied by other approaches, such as sustainable development.

Another limitation that should be mentioned is the temporal context of the Brundtland report which was dramatically different than the one in which "Degrowth" and "Laudato si" were published. The former, despite the fact that its influence over sustainable development has not weaned since its publication, reflects an attempt to revolutionize the environmental

discourse that existed thirty years ago. The latter two were both published less than a year apart and reflect a dramatically different time and far more rich discourse. However most issues on which degrowth and sustainable development dramatically differ are still salient points of contention. For the sake of my research it was necessary to focus my content analysis on one comprehensive document that could accurately represent sustainable development and despite the decades that have passed the Brundtland report still represents the best possible option.

5. ANALYSIS AND DISCUSSION

In this chapter I present my data - the coded text - as a narrative taking into consideration the context of the extracted coding units in order to achieve the highest level of accuracy and adequately represent the analysed texts. Each document and each category (with its subcategories that spontaneously emerged during analysis) is presented separately. The chapter is organized into four main sections which represent the four main categories: 1) population, 2) affluence, 3) science and technology and 4) roots of the environmental crisis. Each section (category) is divided into four subsections, three of which are dedicated to the accurate representation of data extracted from each individual document. The fourth subsection is reserved for discussion in which I engage and compare the presented qualitative data.

5.1. Population

The text that was coded under the population category in the three texts I examined mainly engaged issues of population growth and size, their role in the current environmental, social and economic crises and in which ways those issues should be addressed if at all.

5.1.1. The Brundtland report

The Brundtland report is explicit about its concern for the rates at which the global population is growing. The pace of population growth we have been experiencing prior to the publication of the report in 1987 is seen as one of the main contributing factors to resource depletion and perpetuation of poverty. As such population size and pace of growth should be controlled because “in many parts of the world, the population is growing at rates that cannot be sustained by available environmental resources” (Brundtland and WCED 1987). Furthermore uncontrolled population growth destroys the potential for sustainable

development because it is considered that it "can only be pursued if population size and growth are in harmony with the changing productive potential of the ecosystem" (Brundtland and WCED 1987). At the time when the Brundtland report was written a "gap between numbers and resources" was recognized, poor distribution as a source of this gap was not fully explored. What is recognized, however, is the existence of a "population problem" which was seen as a root cause of environment and development problems (Brundtland and WCED 1987). The assumption is that high population growth rates make it hard for a country to act in environmentally sound ways while they "eat into surpluses available for economic and social development" (Brundtland and WCED 1987). Here it should be noted that the "population problem" pertains not only to the size of the global population but its relationship to available resources (Brundtland and WCED 1987). The report (1987) sees population control policies which "enable a more equitable access to resources" and North's consumption levels (at least at the time of its publication) as a way to not only deal with environmental pressures but problems of mass poverty and inequality as well.

In much of the text dealing with population it is implied that reducing population growth rates is an achievement that enables development and environmental progress, easily compared to air and water pollution control, increasing the efficiency of material and energy use, medical advances that increase quality of life etc. (Brundtland and WCED 1987). A cyclical argument is presented in which birth rates decline due to economic and social development, but lower birth rates are also a prerequisite for economic and social development. However the conclusion is that there is a need for the management of population growth through a top-down approach that is best explained in the following quote from the report:

> "Governments that need to do so should develop long-term, multifaceted population policies and a campaign to pursue broad demographic goals: to

> strengthen social, cultural and economic motivations for family planning, and to provide to all who want them the education, contraceptives, and services required." (1987)

These "urgent steps", according to the report, will ensure the protection of our resource base as well as the increase in our living standards which has been compromised through rapid population growth in developing countries. Thus the "governments that need to do so" tend to be ones that have not yet industrialized (Brundtland and WCED 1987). This is not to say that in industrial countries population size is not seen as a problem, albeit because of somewhat different reasons. In the global North which experiences a lower rate of population growth there still is a pressure on resources and ecosystems despite higher efficiency in their exploitation. The issue, as recognized in the report, lies with not only the increase in numbers but the increase in levels of per capita consumption in developed countries. Those levels are set as an example and their attainment for developing countries is not only assumed but encouraged. However if we are to protect our resource base, the report concludes, it is not the consumption that satisfies our needs that has to change, but the number of those who do the consuming as well as the efficiency with which that consumption is exercised. This is to be achieved through an integration of population policies with other government programs, by increasing environmental knowledge and teaching rational resource management, using economic incentives and disincentives, as well as through a promotion of "direct measures to reduce fertility" such as "increased access to family planning services" which will allow families to choose their size and women to exercise "the basic right of self-determination" (Brundtland and WCED 1987). Sustainable development considers itself not only threatened by high population growth rates but goes as far as concluding that its success is inextricably "linked and mutually reinforcing" with lower fertility rates than those experienced in the 1980s (Brundtland and WCED 1987). It then comes as no surprise that dealing with this

problem is deserving of an entire chapter in the report and a deeper exploration of possible pathways to reach lower rates of population growth. However population policies that are proposed are not only aimed at lower fertility through direct and perhaps crude means, but through increasing the quality of life of the existing population in terms of health and education as well as the position of women in societies (Brundtland and WCED 1987). The international community should actively participate in policy, technology, infrastructure and know-how transfers in order to help developing countries achieve lower fertility rates (Brundtland and WCED 1987).

The exploration of the population category in the Brundtland report has left me with a set of extrapolated positions which are as follows:

1. Current levels of population growth aggravate economic, social and environmental crises
2. Sustainable development is impossible without lower global fertility rates
3. Population growth and size should be controlled through top-down policies

5.1.2. Degrowth

In degrowth literature not much has been written on population growth, or at least the issue has not been explored in the extent others have. However "Degrowth" dedicates a chapter to the explanation of the degrowthers' position on the subject. Similarly to sustainable development proponents of degrowth tend to see population growth as a contributing factor to environmental degradation and resources depletion, however it "puts more emphasis on social inequality in consumption per capita" (Martinez-Alier 2014). In other words population growth should not continue unchecked, but it is not considered one of the most important contributors to the environmental crisis. Degrowth advocates take more issue with unjust distribution of wealth and access to resources as well as extreme levels of consumerism in the

developed world. However population size is not irrelevant since a species can outgrow their ecosystem's carrying capacity and a Steady-state economy depends on a stability of throughput. Since it should not go unchecked it means degrowth advocates for some form of population control.

Population control, if it can be called that, should be left to environmentally and socially conscious individuals and the process should occur in a bottom-up fashion. Such an approach was suggested first by feminist Neo-Malthusians in the 1900s that propagated the concept of "conscious procreation" who concerned themselves with the impoverished classes, particularly disempowered women, who had no control over the size of their families and their bodies (Martinez-Alier 2014). This movement was not only feminist but proto-environmental as it was concerned with issues of carrying capacity of our planet for our species (Martinez-Alier 2014). The solutions proposed were related to access to birth control and procedures such as voluntary vasectomy in an attempt to challenge the economic, political and religious authorities of their time (Martinez-Alier 2014). Inspired by the radical ecofeminist body of thought on the population issue degrowth has kept the idea of voluntarily restricting one's procreation as its position.

The exploration of the population category in "Degrowth" has left me with a set of extrapolated positions within the affluence category which are as follows:

1. Current levels of population growth contribute to the economic, social and environmental crises
2. An unjust distribution of wealth, resources and consumption is a far more significant contributing factor
3. Population growth and size should be managed through awareness raising and bottom-up, voluntary, environmentally conscious family planning methods

5.1.3. Laudato si

The encyclical touches on the population issue briefly, however it is extremely clear on its position towards "policies of 'reproductive health'" (Francis 2015). The Vatican does not recognize the legitimacy of arguments related to a conflict between demographic growth and an increase in equally distributed global well-being. Instead, "Laudato si" focuses on the conflict between an integral development (aimed at a holistic development of each person) and "extreme and selective consumerism" of a global minority (Francis 2015)**.** The levels of consumption that are concentrated in the hands of a minority primarily, but not exclusively, in the global North are those which cannot be sustained, nor universalized due to the inability of ecosystems to provide for it and absorb its waste. Furthermore a focus on population growth management is judged to be "an attempt to legitimize the present model of [unequal] distribution" of resources which is itself the main obstacle to higher levels of widespread well-being on a global scale (Francis 2015). In other words, policies that would aim to regulate fertility rates are seen as another form of ideological invasion that is at odds with the social and environmental goals they aim to achieve. Pope Francis argues that we cannot raise awareness of humans' embeddedness in nature, the interconnectedness of all living things and their intrinsic worth, while at the same time justifying abortion (Laudato si). The Vatican's position asks for the same consideration for the human embryo as we wish to give "other vulnerable beings, however troublesome or inconvenient they might be" (Francis 2015). It then logically follows that policies that justify, encourage or even make abortion accessible cannot be in consistent with the values of ecosystem protection.

The exploration of the population category in "Laudato si" has left me with a set of extrapolated positions within the affluence category which are as follows:

1. Current levels of population growth are not the cause of the economic, social and environmental crises

2. Extreme consumption levels and unevenly distributed access to resources is a larger contributor to the current crises
3. There should be no encouragement and implementation of demographic control
4. Integral human development and environmental protection are compatible with population growth
5. Population control policies are a legitimization of an unjust distribution of resources

5.1.4. Discussion and positioning

Once I organized the reoccurring themes within the population category into a table and analyzed it, it became possible to simplify the position of all three texts and place "Laudato si" in relation to the other two. According to the table a unique position on population (dealing with questions of growth and size) emerged that relates neither to sustainable development nor to degrowth in its core postulates.

The Brundtland report is the strongest advocate for policies that would limit population growth and control the size of the global population. Such policies include ensuring gender equality and women's access to human rights such as that of self-determination. This implies access to family planning, contraceptives and other medical procedures that would allow women and couples to choose the size of their families. These policies are necessary due to the fact that sustainable development considers rapid population growth a great hindrance to economic growth, increase in well-being and quality of life as well as a pressure on our limited resources. Degrowth would have to agree that population growth cannot go unchecked and supports women's reproductive rights. However they are against top-down policies that are strategically implemented from governments and advocate

for voluntary, conscious procreation on a global scale. Another difference between sustainable development and degrowth is that of urgency and relevance. Degrowth does not believe that population growth is one of the main contributors to the current economic, social and environmental crises and consequently does not feel the urgent need to devise and implement governmental policies that would be aimed at lowering fertility rates. Since the heart of the problem is unsustainable economic growth and the production and consumption levels it requires policies should be aimed at liberating both political institutions as well as our imaginaries from the imperative of growth. The Vatican stands in opposition to those of degrowth and sustainable development and presents a third position. Increase in well-being as well as environmental protection and rational use of natural resources are achievable despite current population growth rates and the predicted population size at the moment of peak. The problem is not with the number of people on the planet but with the irrational consumption on the part of a minority. This is an issue that degrowth recognizes as well. But Pope Francis goes further and stands firmly against any policies aimed at lowering fertility rates. Furthermore it is his position that promoting an intrinsic value of all living beings and humans' embeddedness in nature which is a delicately balanced system cannot be done if at the same time we justify abortion.

Within the population category it seems that the position of sustainable development and degrowth are more a kin than that of Vatican is to either of them. If I was to represent my results as a spectrum with one extreme being a recognition of the immense influence population growth has on the current crises and an avocation for top-down regulation and the other a call for voluntary, conscious procreation, "Laudato si" would have to be placed somewhere outside it since it does not even recognize the need to keep an eye on and manage population growth and size.

5.2. Affluence

5.2.1. The Brundtland report

Sentences and small paragraphs that were placed under the affluence category mainly engaged issues of economic growth – its effect on our natural environment, its necessity and position in relation to other current issues such as environmental protection, social stability and equality. Other subcategories that emerged during the subsequent coding sessions included dominant paradigm of development and its character as well as the role of consumption in the economic growth – environmental degradation relationship.

In "Our Common Future" economic growth – as growth of GDP - is a dominant and reoccurring theme that runs through all the chapters of the report in this explicit or a paraphrased form. It is presented and propagated as a primary solution to poverty in a wide array of contexts through statements such as the following: "And we believe such [economic] growth to be absolutely essential to relieve the great poverty that is deepening in much of the developing world" (Brundtland and WCED 1987). Careful reading expanded on the notion of economic growth as a solution not only for poverty but the widest possible range of issues, namely "economic, social and environmental catastrophes" that threaten not only the developing but also the developed world (Brundtland and WCED 1987). The prescription for the global ailments of our time is a revitalization, a quickening and a "five to ten-fold increase in economic growth" (Brundtland and WCED 1987). This is to be applied and stimulated across the board through calculated policies – neither developed nor developing countries need to give up on growth, moreover they should strive for more of it. The role of economic growth as way to advance environmental protection is explicitly stated in the report. An increase in living standards enabled through economic growth is seen as a way to

deal with environmental degradation which is mainly caused by poverty in the developing world and poor management in the developed. In both, however, periods of economic crisis can be blamed for poor conservation efforts that have, in such circumstances "always taken a back seat" (Brundtland and WCED 1987). Economic growth is potentially indefinite, as it has no absolute limits – the issue of limits is a relative one that can be dealt with through innovations. Relative limits are placed on growth in relation to the degree of our development – out capabilities to extend our resource base. This ability will increase if we reconsider the ways in which we try to achieve economic growth. A decoupling of material and energy consumption, as well as greenhouse gas emissions from GDP growth is a way in which growth can be maintained. Growth is seen as sustainable as long as "sustainability of ecosystems and equity is ensured" (Brundtland and WCED 1987). However, its considerations take precedent over the other latter two since growth is the tool through which they can be ensured - social and environmental needs have to be taken into consideration and consequences they experience mitigated as to the best of our abilities through innovation and new management techniques but they should not be an absolute obstacle to growth.

The model of economic growth that is proposed as the one with most potential to ensure a higher degree of global equality and environmental protection is dominated by a free-market paradigm and characterized by a coordinated management focused on expansion, larger capital flows, lower interest rates, free market access and no protectionism, as well as an increase in production and consumption of manufactured goods (Brundtland and WCED 1987). Thus, to ensure well-being a rise in standards of living is needed in the developing world to match not just the level of that in developed countries at the present time, but the one projected for the future point of convergence. Both consumption and production are meant to simultaneously increase and become sustainable, albeit within "a context of higher global growth" (Brundtland and WCED 1987). The possibility of a conflict within the different

components of this assumption – that increased production and consumption can be sustainable, or that economic growth can continue if the world starts producing and consuming sustainably – is ignored and the assertion is taken at face value. Developing and developed countries are expected to break through current barriers to growth while at the same time maintaining an optimal resource base. A diversified free-market economy and a high rate of growth will allow developing countries to literally "outpace their growing internal problems" (Brundtland and WCED 1987).

The consumption levels of developed countries are normalized and set as a target for the developing world to achieve. Questioning the logic that current consumption trends in the global North and economic growth will ensure well-being does not exist, rather the focus is on how to achieve said levels with minimal unmitigated environmental damage. Considerations of uneconomic growth – one that surpasses its actual worth – are not included in the text. There is a moment of recognition for the need for the more affluent population to "adopt lifestyles within the planet's ecological means" which indicates an awareness that if not the quantity of consumption then the character of it needs to change in order to achieve sustainable growth. However it stands alone in this one instance without further elaboration on what this lifestyle entails and how it can be achieved lacking. This approach to change in quality rather than quantity of consumption follows the same logic applied to production and growth in general. The assertion is that it will not be necessary to decrease if we manage to simply change the way in which we increase. The issue of quality of growth, especially when dealing with industrial metabolism - is addressed more often throughout the report mainly in connection innovations that will enable "growth plus change" (Koehler 2015). Statements on the need for radical change in the character of production and consumption do exist but are usually followed by reassurance that more quality does not mean less quantity. Moreover "Our Common Future" is explicit in stating that changing the tools with which we grow is the

way to achieve more growth at a smaller environmental and social cost. The occasional recognition that we cannot continue to grow if growth is not redefined (decoupled from emissions, high energy consumption and large amounts of waste and pollution etc.) should not be ignored, however it should not be confused with a critique of growth as the engine of higher well-being. What should be taken into consideration is the wider context in which the Brundtland report emerged. Every reference to a different kind of understanding of growth – one that is more environmentally and socially sensitive – could be interpreted as an opening for an imposition of an alternative growth path in the future, especially for developing countries. This alternative would be "greener" and more equitable, however it would still be one of growth, and not one *to* growth. Semantically the report does leave openings for discussions on a wider understanding of progress and well-being, however they are meant to serve as additions to GDP growth.

The exploration of the affluence category in the Brundtland report has left me with a set of extrapolated positions within the affluence category which are as follows:

1. Economic growth is a social, economic and environmental necessity
2. Economic growth increases well-being and protects the environment
3. There are no absolute limits to economic growth
4. Economic growth is sustainable when it ensures sustainability of ecosystems and when it is "beneficial for all involved" **(**Brundtland and WCED 1987)
5. Economic growth can be achieved only through a free market approach
6. Economic growth should change in quality through a decoupling from high energy consumption, greenhouse gas emissions and pollution
7. There is no conflict between economic growth and environment\resource preservation
8. Levels of consumption in developed countries should be imitated

5.2.2. Degrowth

The subcategories that emerged from examination of the text placed under the affluence category also deal with economic growth, alternatives to the dominant economic and technocratic paradigm, as well as environmental degradation.

The cornerstone of degrowth is its objection to economic growth as a primary social objective and as a universally applied medication for a wide spectrum of social, economic, political and environmental diseases. Its renouncement of growth – in the sense of "liberation from a productivist obsession - translates into a smaller "societal metabolism" which requires a decrease in energy and material flows through a society and a restructuring that will allow that society to remain operational (Sorman 2014). Societies need to significantly reduce the amount of materials that is used in order to satisfy their population's needs. The imperative of downscaling is based on the assertion that it has not proven possible to achieve "absolute reduction in material use or carbon emissions while growing" without externalizing and exporting that impact into other, less developed countries and into the future (Sorman 2014). To be more specific, it is not feasible that the character of economic growth can be transformed in such a way that it can be decoupled from its negative effects on the environment. Economic processes can be made more energy efficient and less polluting, however the rebound effect will nullify any achieved benefits.

Degrowth goes a step further and does not simply require a decrease in growth, especially in affluent countries, but a change in what is produced, how it is produced, for what purpose and for whom (Kallis *et al.* 2014). In order to achieve such a structural transformation alternatives to the currently dominant economic and technocratic paradigm must be established through the process of "liberating the imaginary" (Latouche 2014). Economism, the invasion and hegemony of market logic into all domains of existence, must be expelled from public debate and a repoliticization of certain spheres must occur in order to

achieve economic downscaling and a social character transformation (Swyngedouw 2014). A change in the imaginary implies a change in the character of growth since "degrowth does not mean doing less of the same", however this change will eventually lead to a decrease in growth not towards enabling more of it (Kallis *et al.* 2014).

The global North has to downscale in order to "liberate space for growth in the South", however this process should be simultaneous with the retreat of ideological pressures placed on developing countries to conform to the dominant paradigm of the global economic system (Kallis *et al. 2014).* It is through this pressure that all possibilities for "countries to find their own trajectories to what they define as the good life" are suffocated (Kallis *et al.* 2014). Economic growth is not only unsustainable, it is insatiable - an impulse that pushes humans towards self-destruction by increasing its marginal costs beyond a rational point (Kallis *et al.* 2014). Moreover the degrowth position is that a decline in consumption does not have to decrease well-being due to the fact that most disposable income is spent on positional goods (Kallis 2014). The theme that occurs most often is the uneconomic nature of pursuing growth past a point when certain basic needs are met because past that point growth begins to cost more than it contributes to well-being.

The exploration of the affluence category in "Degrowth" has left me with a set of extrapolated positions which are as follows:

1. Economic growth has absolute limits
2. Economic growth does not guarantee increase in well-being, moreover past a certain point it increases becomes uneconomical
3. Industrialized countries must experience degrowth
4. The hegemony of the economic growth paradigm must be challenged and conceptual space freed for new alternatives to emerge

5. Past a certain point and in its current form economic growth is uneconomical and unjust
6. The current dominant economic paradigm promotes unsustainable levels of consumption
7. Sustainable growth is a façade for the hegemony of the growth paradigm
8. The logic of the market (economism) should be expelled from the political realm

5.2.3. Laudato si

The exploration of material coded under affluence in "Laudato si" exposed similar reoccurring themes as its subcategories. The text explicitly engages issues of economic growth and dominant economic and technocratic paradigm, environmental degradation and consumption and allows for an extrapolation of the Vatican's position on said topics.

The encyclical is explicit about the lack of automatic causality between economic growth and well-being by stating that "growth of the past two centuries has not always led to an integral development and improvement in the quality of life" or revealing how "people's quality of life actually diminished (…) in the midst of economic growth" (Francis 2015). Moreover the position of the Vatican is that global growth has contributed to an increase of Daly's "illth" (1996) by equating freedom with "the supposed freedom do consume", creating isolated individuals trapped in an utilitarian mindset, and eradicating cultural diversity through a context insensitive "imposition of a dominant lifestyle linked to a single form of production" that is equally damaging to the social and the natural environment (Francis 2015). Thus economic growth is not seen as a universal remedy to all ills, rather it is clear that it can be a strong contributing factor to environmental degradation, social disintegration and individual isolation. The encyclical engages growth more critically and goes beyond its widely accepted measure of GDP by attacking the hegemony of economism in the economic,

political, social and environmental spheres. The term economism is not used, however its meaning is implied in the defence of the autonomy of the political and public domains based on the rationale of the economy. In a similar manner the core postulates of growth are also examined and its subjugation "to the dictates of an efficiency-driven paradigm of technocracy" criticized. A normalization of one conception of well-being achieved through a single, dominant and invasive form of production is seen as a colonization of people's cultures, beliefs and values – a sort of "colonization of the imaginary" (Latouche in DG) through "uniform regulations (…) that can lead to overlooking the complexities of local problems" and a dismissal of the value of entire traditions and worldviews (Francis 2015). What the ideology of growth assumes is that the human race, despite its cultural differences, can be united over a common desire to possess and consume more. However this utilitarian and "consumerist vision of human beings, encouraged by the mechanisms of today's globalized economy, has a leveling effect on cultures, diminishing the immense variety which is the heritage of humanity" while failing to solve the crises we are facing (Francis 2015).

"Laudato si" calls for an expansion of free space in which progress and well-being can be alternatively defined and exist in a multitude of forms simultaneously. It is our narrow focus on just one supposed path to happiness and its aggressive proliferation that has brought us to a spiritual, moral, social, environmental, political and economic precipice. The central issue that the encyclical raises is the falsehood of a widespread belief in the unlimited possibility of economic growth which promises us win-win solutions in which humanity can have its cake and eat it too. However this belief is "based on a lie that there is an infinite supply of the earth's goods" and that the natural world can continue to adapt and resist our immense exploitation (Francis 2015). On the other hand "Laudato si" explicitly states that it is impossible to simultaneously "acknowledge the value and the fragility of nature" and cling to "the modern myth of unlimited material progress" (Francis 2015). This set of internalized

yet conflicting beliefs has the modern man in a perpetual state of cognitive dissonance that leads to compulsive, obsessive and (self-)destructive behaviours such as a "disordered desire to consume more than what is really necessary" (Francis 2015). Economic growth has its material limits that cannot be extended indefinitely, but must be acknowledged and accepted in order to achieve a higher level of well-being. Similarly the encyclical rejects normalizing the consumption levels of developed countries due to their long-term unsustainability. The insatiable wants and the idea of limitlessness is a product of what David Loy (2003) calls the true religion of our times – the belief in the market – since it is the "desire for profit [that] is necessary to fuel the engine of the economic system, and an insatiable desire to consumer ever more must be generated to create markets for what can be produced". This is why Pope Francis stresses that "we need to reject a magical conception of the market, which would suggest that problems can be solved simply by the increase in the profits of companies or individuals" and create new mechanisms for determining the value of commodities based on their actual worth (Francis 2015).

The cognitive dissonance of the dominant paradigm tries to resolve the internal conflict by exploring ways in which it can continue to remain the same, but deliver a different outcome. Thus often modifications to the existing structure are made, but "halfway measures simply delay the inevitable disaster" (Francis 2015). The problems with the economic system are structural and inherent to it because the system is cantered on the lie of the possibility of indefinite economic growth as a solution and a goal while it simply enables more of the same by slightly different means. The paradigm of growth lacks far-reaching vison and width to truly encompass the entirety of human well-being while taking up all the space for alternative visions of progress to emerge. Sustainable growth is one such modification of the growth paradigm, according to "Laudato si", in the sense that it "absorbs the language and values of ecology into the categories of finance and technocracy, and the social and environmental

responsibility of businesses often gets reduced to a series of marketing and image-enhancing measures" (Francis 2015). It is the purpose of economy that we need to re-examine and rediscover, because its growth has not proven to be a worthy one in itself, nor has it delivered on the promise of greater and shared well-being.

It follows from my examination of the text that it is not enough to "tweak" the current economic system by incorporating within it "a few superficial ecological consideration while failing to question the logic which underlines present day culture" because the system relies on ever increasing consumption which the market promotes (Francis 2015). The position of the Vatican is that the problems with the system are not so easily carved out and without consequence to the character of the structure. Rather they are a constitutive part of it and removing them means turning the system into something entirely different through a far more radical change that "calls for rethinking processes in their entirety" (Francis 2015). This stance allows for the encyclical to go further and explicitly call for degrowth in the developed world. Acceptance that economic growth has real limits means accepting the game is zero-sum and win-win solutions in a GDP sense are impossible and "that is why the time has come to accept decreased growth in some parts of the world, in order to provide resources for other places to experience healthy growth" (Francis 2015). Healthy growth implies a much broader meaning that surpasses standard definitions of economic growth, however it would be false to say it leaves it completely behind. A certain level of growth is needed in countries unable to provide their people with basic needs, but degrowth in the North would weaken the classical growth imperative and open up space for other models of development inherent, and best suited to each given culture. A standardization of regulations in the global economic system that use market tools in an attempt to protect the environment and control pollution are not only deemed invasive and ineffective, but a way to reaffirm the hegemony of "the efficiency-driven paradigm of technocracy" rather than contesting its inherent logic (Francis 2015). For

example the carbon trading system is deemed a façade which protects the *status quo* "under the guise of a certain commitment to the environment" (Francis 2015). Using tools native to the capitalist free market system is judged to be hypocritical. According to Pope Francis the market possessed the ability to internalize all negative externalities and distribute them justly among those who are responsible for them, and if this was an immediate process, and the punishment localized in time and space those actions could perhaps be considered ethical and the economic system functional. However this is impossible. Not only is the market never completely aware of all the negative consequences of our actions, it cannot always locate those responsible. Even if this was possible, it would not be feasible to ensure that the burden of those actions are born solely by the guilty or that that burden can even be borne and that bearing it would remedy the harm inflicted.

The exploration of the affluence category in "Laudato si" has left me with a set of extrapolated positions which are as follows:

1. Economic growth does not ensure well-being, moreover past a certain point it becomes uneconomical
2. There are limitations to economic growth
3. Economic growth is short-sighted and too narrow
4. The current economic system promotes unsustainable levels of consumption
5. The market is incapable of solving environmental problems by maintains the *status quo*
6. "Sustainable growth" is a façade that avoids structural change and perpetuates the *status quo*
7. There is a hegemony of a single mode of production and a single value system
8. The logic of the market (economism) should be expelled from the political realm
9. The purpose and goals of the economy should be reexamined

10. A radical change in our economic system and definition of progress is needed
11. Some parts of the world must experience "a decrease in growth" (Francis 2015)

5.2.4. Discussion and positioning

Once I recognized and organized the reoccurring themes within the affluence category that emerged through a thorough analysis of the data it became possible to simplify the position of all three texts and place "Laudato si" in relation to the other two. According to the table it became obvious that on the position of affluence (dealing with questions of economic growth and consumption) the Vatican's perspective is a kin to that of degrowth.

Both degrowthers and the encyclical explicitly state their belief in physical limits to economic growth and reject the idea that it is a sound social objective for all countries regardless of their level of industrialization and consumption. According to the Brundtland report's position on sustainable development economic growth not only needs to continue but has to pick up pace on a global scale in order for the global population to achieve intra- and intergenerational well-being. For the proponents of degrowth and the Vatican well-being is not connected to economic growth, especially past a certain point, but can even be negatively affected by it. Sustainable development as it is formulated in Brundtland argues that there is only one way out of the economic, environmental and social crises we are faced with and it is through directed economic growth that will have consideration for the environment and the global population.

The Brundtland report advocates for a global application of a free-market approach to growth. The belief that a free market can be the unifying factor between radically different countries that participate in the interconnected global economy is a relevant characteristic of sustainable development. Furthermore the logic of the free market is seen, not as a product of a specific historical and cultural context that can come into conflict with other traditions, but

something outside of them, something that can be applied and accepted universally and despite cultural differences. Degrowth and "Laudato si" argue that an important contributing factor to the current environmental and social crisis is the hegemony of single definition of progress and well-being that has a levelling effect on alternative visions that spring from the specificities of different cultures. Even though "Laudato si" does not express a position explicitly and in direct opposition to economic growth, it does agree with those who advocate for degrowth that growth in itself is neither good nor should it be a primary social objective. This is possible because neither equate it with integral human development with. The Brundtland report tends to follow a roundabout approach to growth – it sees it as both a cure for the economic, social and environmental crises and as something that curing those crises will enable to continue indefinitely. The argument for sustainable growth is its assumed positive effect on the environment, the resource base and human quality of life, and the need to ensure those things comes from the realization that growth cannot continue without them. Thus it seems that for sustainable development growth takes priority over other issues and, at best, has consideration for them. In the encyclical the purpose, direction and form of our economic system needs to be rephrased so it could serve a different vision of progress and well-being. As such growth or no growth should be seen as instruments to be used in achieving a higher purpose. For degrowthers the purpose of the economy is also instrumental, and all commodification outside the economic sphere should be strictly avoided. Moreover economic growth as GDP increase is seen as an instrument of destruction of well-being, not its construction. In the latter two texts social and environmental issues take precedent over economic growth.

The position of the Vatican coincides with that of degrowth when it comes to acceptable levels of consumption. Both believe that not only are current levels of consumption in the global North unsustainable and unjust, but that they are in direct conflict

with the aspiration to achieve widespread well-being and equality. Both consumption levels and the size of the economies of industrial countries will have to decrease in order to ensure an increase in quality of life at the global level. However the Brundtland report approaches well-being differently and does not see the uneconomic potential of economic growth, nor does it share the position that consumption levels should decrease in the North to make room for satisfying the needs of the South. Furthermore it places them as a standard that needs to be achieved in order to ensure good quality of life and focuses on a way in which this aim can be fulfilled without further harm to the environment.

5.3. Science and technology

The third and last of my predetermined categories is one dealing with the role of technology in the current social and environmental crisis. Analysis of the sentences and paragraphs that were placed in that category through directed coding allowed for a few subcategories to emerge that will be explored in the following paragraphs.

5.3.1. The Brundtland report

Within the Brundtland report scientific innovation and technology is seen as the heart of economic growth as it will not only enable savings and an increase in the efficiency of the production process, thus ensuring profits, but it will enable an infinite extension of the existing resource base. At the same time new technology will minimize pollution and solve the problems of waste disposal (Brundtland and WCED 1987). Technology transfer will enable developing countries to achieve the necessary growth that will raise their living standards to the level of those in the developed world, which means that they will be able to implement "green growth" in an earlier phase of their development. Technological innovation will change the character of growth that sustainable development promotes which will make it possible to maintain and increase levels of consumption in the developed world as well as the developing. Such development will require investment in research and innovations, which is considered crucial because "the promotion of sustainable development will require an organized effort to develop and diffuse new technologies" (Brundtland and WCED 1987).

The use of technology, even within sustainable development, is not without its risks, as "new forms of pollution and the introduction to the planet of new variations of life forms that could change evolutionary pathways" (Brundtland and WCED 1987). Sustainable development recognizes the potential of scientific and technological innovations to

significantly impact and alter our reality on multiple levels that include the social, economic and the physical. However it assumes that with improvement in management and continuation of innovation humans can reap the benefits while minimizing the potential risks assessed through the use of empirical science. Such benefits include higher rates of growth with less negative externalities which consequently brings about higher standards of living, improved health and increased well-being. Risks of technological innovation can be dealt with through risk assessment and management and economic growth can essentially be decoupled from greenhouse gas emissions and high levels of energy use and pollution (Brundtland and WCED 1987).

In qualitative document analysis sometimes negative space should also be noted because silence on an issue can speak louder than words. Within this category I noticed a lack of recognition of an existence of a single paradigm that dominates the science and technology domains. Furthermore, its potential and structural fallacies, assumptions and gaps in knowledge are not reflected upon. The Brundtland report does not acknowledge that the current belief in empirical science as a means to finding ultimate truth and universally applicable solutions thus implicitly accepting the current paradigm without question. Rather it focuses on how it can be directed towards enabling more economic growth with less negative effects, than exploring its potential inadequacies to deal with the complexities of our current global crises.

The exploration of the technology category in "Our Common Future" has left me with a set of extrapolated positions within which are as follows:

1. Scientific innovation and technology development drive economic growth
2. Technology can be a cornerstone solution to the environmental crisis and the associated social and economic crises

3. Scientific innovation and technology developed at mitigating negative externalities can allow infinite growth
4. Technology enables higher levels of consumption with consequences reduced to a sustainable level
5. Technology has risks that can be assessed, predicted, managed and mitigated – science helps to manage uncertainty
6. The decisions on impact, risks and use of technology innovations belongs to a "class" of experts

5.3.2. Degrowth

Degrowth is not *a priori* opposed to the use of science and technology. It recognizes their benefits for well-being, but also understands their current role as an engine of economic growth. Furthermore it is exactly this symbiosis of growth and technology that makes it an inadequate solution to the conflict between growth and environmental protection that degrowthers see as inherent to their relationship. Technology might increase efficiency but due to the rebound effect it can also increase resource consumption. Looking at human history "the more technologically advanced and efficient an economy becomes, the more resources it consumes because resources get cheaper" and an increase in consumption is still a cornerstone of economic growth (Kallis *et al.* 2014). The problem with the growing faith in technology as a solution – the techno optimism - is a "depoliticization" of science and technology and the "technocratization of politics" which has rendered "environmental problems technical, promising win-win solutions and the (impossible) goal of perpetuating development without harming the environment**"** (Swyngedouw 2014). This belief is problematic because it postpones engaging what degrowth believes is a core dilemma that exists between pursuit of infinite growth and well-being, modernization and ecologization

(Kallis *et al.* 2014). More specifically, technology cannot create growth without creating environmental damage – developing technology, research and innovations is an energy and resource intensive process. The belief that the current environmental crisis is a technical problem which requires an adequate technical solution within our grasp is failing to engage deeper issues underlying our present state.

Another aspect to technology is its potential, already discussed in the Brundtland report, to alter our reality. Tools and technology do "not exist in a vacuum but, rather, are immersed in networks of social and gender relations" and their production and use must be considered with this fact in mind (Deriu 2014). According to degrowth social limitations should exist on the production of tools that serve to breed new needs and more consumption in order to perpetuate the existing economic system. The current system focused on growth tends to produce a vast quantity of "tools that are seemingly indispensable, but which, primarily, devalue individual autonomy and force people to become increasingly dependent on commodities" thus losing their autonomy, their ability to control the way in which they conjure and satisfy their needs (Deriu 2014). Setting the limits on technology development – deciding what should be explored and produced – is difficult, however those who advocate for degrowth believe that both science and technology should remain in the domain of public discussion, serve to solve practical problems and its use should foster an expansion of "freedom, autonomy and human creativity" (Deriu 2014). This approach aims at challenging the monopoly of industry and capital in the scientific and technological domains of societies in the sense that the decision on the direction of our scientific and technological progress are not made on the basis of economic profit.

Degrowth advocates the introduction of Post-normal science (PNS) as an alternative to the currently dominant "industrial science that is entrepreneurial and which produces a runaway technology" is applied in discussions "when facts are uncertain, values are in

dispute, stakes are high and decision urgent" (Funtowicz and Ravetz 1994). The need for PNS comes from accepting the incommensurability of certain values and rejecting the belief in conventional science as the ultimate and only holder of truth. In issues that involve ethical dilemmas degrowth suggests the use of "extended peer communities" which besides scientists include all other stakeholders in the issues (D'Alisa and Kallis 2014). Science in this case is supposed to not only help manage uncertainty, but "respond to the different concerns emerging from the multiple narratives of the issue at stake" (D'Alisa and Kallis 2014). Since science is not the only truth holder, scientist are not the only ones who can access that truth. The input of and consideration for others' positions becomes a valuable part of the decision process and not a time-consuming distraction once a society transitions from the need to arrive at an efficiency optimal solution to an aim of social consensus. Public discussion in this sense truly becomes a deliberative process that aims at finding the best solution in light of emerging information and held beliefs. Similarly the domain of science and technology could be reimagined in a way in which it is no longer "a self-referential system that discovers what can be discovered for the sake of itself" (D'Alisa and Kallis 2014).

The exploration of the technology category in degrowth has left me with a set of extrapolated positions within which are as follows:

1. Innovations and technology drive economic growth
2. Technology enables higher levels of consumption which increases the level of resource depletion
3. Technology is not a solution for the environmental crisis
4. Technology is a means for depoliticization and technocratization of society
5. Technology is more than tools, it has its inner logic that can alter reality
6. Technology should be used only if its use expands human freedom and autonomy

7. The domains of science and technology should be directed by a deliberative public process that reflects a community's values and traditions, not by profit

5.3.3. Laudato si

The encyclical engages issues of technology and scientific innovations and their application quite seriously and devotes a lot of space to the discussion of its role in our lives as well as the current context of climate change and environmental degradation. Similar subcategories as in the previous chapters emerged throughout my readings that engage the issues in its own unique way.

"Laudato si" also recognizes the dual character of technology in the sense that it has the potential to drastically increase and to degrade the quality of human life. A problem emerges when what Pope Francis names "technoscience" is seen as neutral and presented as a cornerstone for solutions to current environmental problems without further qualification (Francis 2015). This assumption that science will always ensure adequate insight and (technological) solutions has led to projections and policy recommendations that span decades and are based on technologies we are not close to discovering. Furthermore, the idea that humans can come to know and anticipate all the complexities of environmental degradation and their manifestations through science (which will also endow them with solutions for the damage done) has lulled them into an existence characterized by passivity of action and hostility towards a search for alternatives. However, more often than not, technoscience "solves one problem only to create others" (Francis 2015). Not only is technoscience flawed due to lack of available and relevant information, knowledge and skills but it also has the ability to concentrate immense power in the hands of a select few who control it and profit from it, but it subtly imposes one way of interpreting reality above others. This is facilitated by the widely accepted belief that science and technology lie outside the

realm of public understanding and discussion, in an exclusive technocratic domain. This further fortifies its power, most often kept in the hands of "those with the knowledge and especially economic resources" because it makes it difficult to question (Francis 2015). The growing focus on technological, win-win solutions in the environmental discourse comes to serve as both a marketing strategy as well as a diversion from the real, structural problems of the global economic system.

Innovations in science and technology have to be controlled and limits have to be placed on them in accordance with the values and goals of a society. Those goals, according to the encyclical, are not static, rather they should be constantly revisited and re-examined in order to provide "ethical limits of this human activity, which is a form of power involving considerable risks" (Francis 2015). Thus out of a conversation of many fields of knowledge that include more than just the natural sciences and extend as far as philosophy and social ethics is needed in order to align our tools with our goals and limit our insatiable thirst for discovery. This change does not seem to be possible without a cultural revolution that will lead a "resistance to the assault of the efficiency oriented technocratic paradigm" that threatens to level all other approaches to the solution of this crisis by subjugating them to its own logic (Francis 2015). For Pope Francis it is clear in his position that empirical science is unable to provide a holistic explanation of our existence and the complexities of our social and natural worlds (Francis 2015). As long as it does not include a consideration for "various cultural riches of different peoples, their art and poetry, their interior life and spirituality" it will remain an inadequate solution for the globally occurring social, economic and environmental problems (Francis 2015). The criteria for establishing the usefulness of each innovation should emerge from a new concept of progress "one which is healthier, more human, more social, and more integral" (Francis 2015). The encyclical sees the role of technology as more focused on assisting with practical problems "truly helping people live

with more dignity and less suffering" and less concerned with enabling efficiency (Francis 2015). There is an explicit expression of a feeling that the authentic human lies squashed beneath a burden of a technology driven culture which does not allow for the manifestation of a more humane alternative. Technology is not a simple tool in the sense that it is not only used for a practical purpose – to solve a problem at hand and then be put away – but it has become a way in which we view the world, its problems and potential solutions to those problems. Pope Francis urges a rejection of the widely accepted belief that scientific and technological progress guarantees an overall progress and increase in well-being. In fact it is, he argues, "the accumulation of constant novelties [that] exalts a superficiality" which distances humans from their true nature and the possibility of well-being (Francis 2015). Pope Francis' assertion is that more often than not humans are at odds with the objects they created because they find themselves trapped within "a framework which ends up conditioning lifestyles and shaping social possibilities", often directed by powerful economic interests (Francis 2015).

If technological innovation was judged through a lens of an alternative definition of progress and if profit did not play such an important role in the decision process of what should or should not be developed and applied technology could be considered benign. However this is not the case at present because "the orientation of the economy has favoured a kind of techno progress in which the costs of production are reduced by laying off workers and replacing them with machines" and a disregard for other "potentially negative impacts on human beings" (Francis 2015). These alternative visions for a more productive, healthier relationship towards technology manifest themselves through forms of self-limitation of environmentally conscious cooperatives who chose not to employ all tools at their disposal in order to minimize costs, or non-consumerist communities that have given up on certain

technological luxuries in order to exit the subtle dominance of the technocratic paradigm and learn to employ "technology as a mere instrument" (Francis 2015).

The exploration of the technology category in "Laudato si" has left me with a set of extrapolated positions within which are as follows:

1. Science and technology can be productive and destructive
2. Technology is not the sole solution for the environmental crisis
3. Technology concentrates power in the hands of a select few
4. Science and technology are dominated by a profit logic
5. Science and technology has its inner logic and a way of altering the social world
6. Science and technology should be directed by social goals on which there exists a public consensus and not solely be experts

5.3.4. Discussion and positioning

The analysis of the category of science and technology perhaps presented the most nuances in positions. However, despite their differences I argue that the position expressed in "Laudato si" is closer in its core postulates to that of degrowth.

In all three texts technology is not accepted without reflection because its power to influence both the social and natural world is recognized at neither malignant nor benign. Scientific and technological innovations can influence our quality of life in a positive or negative way, depending on the context. However the Brundtland report is far more techno-optimistic than degrowthers or the Vatican, believing that scientific and technological solutions are keys to resolving the current crises. Moreover an assumption of a certain, minimum level of "green" technology development is made when considering and planning for the future. Technological advancement in a desired direction is seen as immanent if proper policies and incentives are devised. The encyclical and degrowth express a similar view of

science and technology in the sense that it should be developed in order to solve practical daily problems and increase well-being, however they place more accent on the need for the repoliticization of the decision-making process that directs scientific and technological innovation. Technology is not considered a key solution to the environmental crisis, rather it is a change in what we consider progress. Degrowthers do not believe technology and science can ever enable a decoupling of production of goods and services from negative environmental externalities to the extent in which its increase can continue indefinitely. "Laudato si" rejects technology's role in enabling high levels of consumption (even if they were to be evenly distributed) because those levels are not only environmentally harmful but also detrimental to human spirituality. For sustainable development technology and science serve as means of enabling and increasing levels of consumption, and consequently infinite growth. However the Brundtland report does express a concern with an unsustainable perception of needs and consumption standards that are ecologically unsound, but this happens on two occasions and is not carried through the document consistently. The change in consumption standards that is suggested flows more into the argument of change of quality rather than that of quantity – what is consumed can become less damaging to the environment due to science and technology innovations. In this way they can allow further economic growth on a global scale with less pressure on the resource base as well less negative externalities. Such belief is non-existent in both the degrowth glossary and the encyclical.

Implementation of solutions brought about by innovations without a paradigm shift, according to both the Vatican as well as degrowth proponents, will not yield a solution to the environmental crisis. It is their shared belief that science and technology are predominantly driven by profit, concentrated in the hands of a select few, and the sphere of technoscience has become exempt from public control and direction to a large degree. Investment and

research are often directed towards products that enable higher profits and do not necessarily contribute to the greater public good.

Unlike sustainable development, degrowth and "Laudato si" do not believe that empirical science holds the key to truth. Their position stems from an awareness of the incompleteness of knowledge generated by scientific methods and the need to supplement them with insight from other, diverse avenues – PNS. For degrowth and the Vatican this means including a wider community in the decision making process about science and technological innovations taking it out of the sole hands of technocrats and opening it up to culturally diverse interpretations of possible implications. Sustainable development, on the other hand, does not enter into a discussion of possible fallacies of empirical science and consequently the limits to which it can be of use while diagnosing and curing our current economic, social and environmental ailments. It can be concluded that it does not recognize the existence of a fallible efficiency driven techno-scientific paradigm or contest the claim that science is the only legitimate method to unveiling objective knowledge which differentiates it fundamentally from both degrowth and "Laudato si".

5.4. Roots of the crises

The need for this category I analysed emerged during my multiple reading sessions. It deals with the position of the Vatican, sustainable development and degrowth on root causes for the environmental crisis and expands on the former three categories to encompass other variables that were not addressed through my IPAT framework but are relevant to at least one of the three approaches. Some subcategories overlap (economic growth, unsustainable levels of consumption, hegemonic mode of production) while others emerge that were not yet discussed. Within this category what was not said was more interesting to explore than in earlier sections since the silence on certain topics shows us in which direction each approach looks for sources to the current situation.

5.4.1. The Brundtland report

For sustainable development the environmental crisis can be attributed to both poorly managed economic growth and to lack of growth. However "failures of development" are presently considered to be more concerning sources of environmental degradation since "management of our human environment" in the developed world has improved and it can be transposed there where it is not yet established (Brundtland and WCED 1987). The problem is far greater in developing countries in which lack of economic growth has resulted in extreme poverty, lack of education, irrational resource exploitation and environmental degradation. Lack of growth is an explicitly reoccurring theme when it comes to the environmental crisis because whenever "growth was cut back and many social objectives fell by the wayside, including those having to do with employment, health, education, environment and human settlements" (Brundtland and WCED 1987). The report directly links environmental degradation to conditions of economic recession and austerity measures

because those are times in which governments cut back on all expenditures not intended to jump start growth, and people return to "subsistence agriculture, where they draw heavily on the natural resource base and thus degrade it" (Brundtland and WCED 1987). When countries that rely protectionist economic policies suffer economic stagnation or decline severe environmental degradation follows due to the "pressure on environmental resources as more people have been forced to rely more directly upon them" (Brundtland and WCED 1987). In order to increase the standard of living in times of economic hardship the government fails at proper environmental management which is costly and seen as a hindrance to growth (Brundtland and WCED 1987).

The developed world has also experienced periods of inadequate growth which have had consequences on both the social and environmental world. These periods were followed by policies intensely focused on revving growth. After the Great Depression and the experiences of World War II increase in GDP and standards of living were welcomed without much questioning. The environmental movement did not gain traction for decades to come – not until unchecked industrialization, economic growth and consumption had taken their toll on the environment which began to show concerning symptoms. By the time the Brundtland report was published environmental issues had become more salient in the public discourse. Many regulative steps had already been taken in order to measure, control and minimize the negative externalities the public was becoming aware of (Ruckelshaus 1984). Serious damage had been done, however steps had also been taken to reverse it. Currently the fact that developed countries have succeeded in becoming less energy intensive than in the past is one example of how the North no longer pursues prosperity in a short-sighted manner (Brundtland and WCED 1987).

Despite the growth in the environmental regulation sphere of many Western countries "failures of management of our human environment" still occur (Brundtland and WCED

1987). Due to the incompleteness of our knowledge of the complexity of the natural world and our interaction with it, it is impossible to have all the relevant information and insight into the potential, cumulative effects of growth on the environment. This makes devising an adequate management strategy extremely difficult. However it is the position of the Brundtland report that sustainable development provides one such strategy that will prove to be efficient when applied both in the developed and the developing world.

The report does reflect on the potential unsustainability of growth in both developed and the developing countries by noticing how it "draws too heavily, too quickly, on already overdrawn environmental resource accounts to be affordable far into the future without bankrupting those accounts" (Brundtland and WCED 1987). This is in line with the position of sustainable development, presented in the Affluence category, where economic growth should change in character – become "greener" - in order to become sustainable for generations to come.

The roots of the current crises are not seen as structural, inherent to the current economic, political and institutional system of the North. Rather they are a result of inadequate strategies due to lack of access to complete information at the right time, or their poor implementation and monitoring. The postulates of the system are not the one responsible for global economic, social and environmental problems but our poor understanding of it. Unchecked population growth, lack of development and consequently the degradation of the environment in the global South, due to heavy resource exploitation, is a result of historical and cultural context as well as improper economic policies that have failed to integrate those countries into the global market and the *laissez-faire* doctrine (Brundtland and WCED 1987). The report explicitly argues that the current political, economic and institutional system of the global North represents the best possible framework within which those problems can be engaged. Thus governments fail to make the best use of the setting provided to them by a

globally intertwined economy in the form of free market capitalism and in that cause economic, social and environmental decline.

The cultural aspect emerges as one possible factor that contributed to the environmental crisis, however it is mentioned sparingly and explored rather superficially. Not only does culture and historical context influence the individual and collective, national attitudes towards economics, the market and the environment in developing countries, but it does so in the developed as well. The culture of the North prior to the seventies allowed for the flourishing of a harmful type of growth because the perceived needs of its population were "socially and culturally determined" (Brundtland and WCED 1987). The cultural change that occurred then was significant, and a change of that magnitude, if not greater, is called for again in order to promote a more informed population that will consume "greener" products.

The exploration of the roots category in the Brundtland report has left me with a set of extrapolated positions within which are as follows:

1. Poorly managed economic growth or lack of economic growth are major causes for environmental degradation
2. Culture can affect the character (sustainability) of growth and consumption
3. Economic growth can be made more energy efficient and managed in a way in which it can continue, with minimal negative effects on the environment
4. The "failures of development and failures in the management of our human environment" that are roots of the environmental crisis are consequences of correctable error, not a chronic predisposition of the current economic system (Brundtland and WCED 1987)

5.4.2. Degrowth

For degrowth it is "the desire for growth [that] causes economic, social and environmental crises" (D'Alisa *et al*. 2014). According to Latouche (2014) this desire is a result of a colonized imaginary that places economic growth in the center of human needs because of a mistaken belief that it is the only path to their fulfillment. With this in mind the source of the environmental crisis is not one of a mistaken strategy, although that is certainly a part of it, but of a hegemonic paradigm that prevents us from seeing the fallacies inherent to our current social and economic systems. The "colonized imaginary" which has depoliticized major economic, social and environmental issues and brought about a commodification of non-market spheres and relations (Latouche 2014). The current crises are thus understood as a consequence of a dominant culture and the value system that culture imposes. "The economization of minds" is both an individual as well as a social problem that will be impossible reverse within the same culture that has brought us here. A worldview that raises the free market logic above an ideology and considers it inherent to human character needs to be rejected in the North and the South must be released from its grip (Latouche 2014). A cultural shift freed from the pressures of the growth imperative that recognizes that small can also be beautiful (Schumacher 1989).

The exploration of the roots category in "Degrowth" has left me with a set of extrapolated positions within which are as follows:

1. The desire for growth is a root cause for the environmental crisis
2. A mistaken belief that economic growth can continue indefinitely and ensure well-being is a cause for environmental degradation
3. All of these are a consequence of a distorted value system that has been colonized by economism

5.4.3. Laudato si

The encyclical builds its position on the roots for the environmental crises upon the words of Pope Benedict which explicitly blame "the culture which shapes human coexistence" (Francis 2015)**.** More specifically, the responsibility is not only with the behavior of individuals, but the distorted value system that individual resides in. Both are a result of conditioning by the present day culture that prioritizes "the interests of a defied market, which become the only rule" (Francis 2015). No solutions will be found until our actions are preceded by a "broad cultural revolution" that will result in an alternative definition of progress and well-being and "reject the magical conception of the market" (Francis 2015)**.** The encyclical looks at the modern individual and sees him enslaved within a value system that promotes irresponsible and unsustainable behavior in order to maximize economic efficiency and profits. The ethical decline of men and women is due to the daily exposure to pressures of an unjust, profit motivated, consumerist culture that "makes it difficult to develop other habits" (Francis 2015).

For "Laudato si" the roots are innate and embedded firmly into the current culture and its physical manifestations in the global economic system. In order to not only survive the crisis but learn from it, the human race must deal with the foundational postulates of its present day culture. For Pope Francis those are extreme and selfish individualism that stems from "the notion that there are no indisputable truths to guide our lives and hence human freedom is limitless" (Francis 2015)**.** Tweaking the currently dominant economic system by implementing mechanisms that will ensure more consideration is given to social and environmental issues will yield no results if they continue to abide by the same, efficiency driven, market logic that has penetrated all areas of human life. If the paradigm, that has legitimized the system and its chronic ills, remains profoundly unchanged we will be left with "a false or superficial ecology which bolsters complacency and a cheerful recklessness"

which will enable the continuation of the same, albeit under another name (Francis 2015). In his strong endorsement of a cultural paradigm shift Pope Francis calls upon the words of Bartholomew who

> "has drawn attention to the ethical and spiritual roots of environmental problems, which require that we look for solutions not only in technology but in a change of humanity; otherwise we would be dealing merely with symptoms. He asks us to replace consumption with sacrifice, greed with generosity, wastefulness with a spirit of sharing, an asceticism which entails learning to give, and not simply to give up." (2015)

The manifestations of the environmental crisis are, according to "Laudato si", a consequence of the production and consumption models that dominate the global North and are relentless in their invasion of the cultures in the South. Furthermore those models are a result of the current hegemony of a specific definition of development that is intricately woven in with the notion of infinite economic growth. Such a causal chain is a product of a culture supported by the powerful "alliance between the economy and technology [which] ends up sidelining anything unrelated to its immediate interests", the lack of "other ways of understanding the economy and progress, (…) forthright and honest debate, the serious responsibility of international and local policy" and the "weak international political responses" that allow for novel proposals of alternative models of progress (Francis 2015). Imagination has run dry or has been stifled so easily due to the fact that "the external deserts in the world are growing, because the internal desserts have become so vast" (Benedict XVI cited in Francis 2015). For Pope Francis the crisis is moral and cultural before it is economic, social or environmental. It is a crisis of identity, of spiritual degradation that has finally spilled over into the physical world wreaking havoc on those who are often the least responsible.

The exploration of the roots category in "Laudato si" has left me with a set of extrapolated positions within which are as follows:

1. The roots of the environmental crisis can be found in the dominant culture that subjugates all social spheres to the rules of the market
2. This culture has caused both an environmental and ethical degradation
3. The dominant understanding of progress and well-being that is coupled with economic growth causes environmentally degradation
4. The dominant modes of production and consumption cause environmental degradation

5.4.4. Discussion and positioning

The analysis of the category of roots of the environmental crisis has exposed that the position expressed in "Laudato si" overlaps in significant ways with that of degrowth despite some notable differences in approach and language. The Brundtland report touches on some of the issues that are relevant for the other two texts, however it remains too focused on ensuring and managing growth to explore them further.

The analysis of the category of roots of the environmental crisis has revealed that the position expressed in "Laudato si" is mostly concerned with the moral decline of the individual as well as entire societies. Degrowth and sustainable development do not venture into the sphere of individual morality. However comparison of other subcategories within this category has revealed nuanced similarities between the positions of degrowth and the Vatican. The individual is under constant pressure exerted from his social surroundings. A coping mechanism becomes the adoption of the "milieu of extreme consumerism" and obedience to its rules in hopes of finding meaning and well-being (Francis 2015). Such a stance accentuates the impact present day, "self-centred culture of instant gratification" and

its values have on individual behaviour, national policies and international priorities (Francis 2015). That culture is a consequence of "rampant individualism" and "a consumerist vision of human beings encouraged by the mechanisms of today's globalized economy" (Francis 2015). However the preoccupation with the influence of a distorted culture of no moderation is not exclusive to the encyclical. As was mentioned in the earlier sections, both degrowth and sustainable development engage this issue to a larger or lesser degree. The difference stems from how the dominant culture is perceived and if its distortions are acute or chronic. The Brundtland report sees the power of culture to change our perceptions of what we need and to steer us as consumers towards sustainable choices. It is difficult to say what those choices should be since the topic is not engaged further in the report. However an explicit critique of the current value system in terms of quantity of consumption and production is never presented. Moreover, a call for achieving North's levels of consumption in the South is considered necessary "if essential needs are to be met" and global economic growth continued (Brundtland and WCED 1987). For "Laudato si" and degrowth the cultural problems stem from a specific mode of production and a dominant paradigm that depend on high levels of unsustainable consumption for its perpetuation. The only effective change is a drastic one that includes an individual and collective, social liberation of minds (Latouche 2014), or in other words an individual and a social conversion (Francis 2015).

Both the economic system and the throw-away consumerist culture that perpetuate each other have to be rejected as a path to well-being and happiness. Such s dramatic call does not occur within sustainable development expressed in the Brundtland report. The avoidable errors of the established economic system simply need to be corrected and new strategies have to be deployed in order to make it more environmentally sustainable. The system itself and its inherent logic is never questioned, nor is its imperative for growth fuelled

by consumption. Moreover it is growth that is the solution, not the cause of environmental degradation in the sustainable development approach.

6. CONCLUSION

This research aimed to clearly identify the position of the Vatican expressed in 'Laudato si' on four selected issues pertaining to the current environmental crisis and compare it with the positions of sustainable development and degrowth in order to evaluate to which it relates more. This was achieved through a framework based on the IPAT equation and by the use of content analysis that allowed for a deeper understanding of the three analyzed texts. Each was

The results of the analysis revealed that when it comes to issues of population growth and its role in the environmental crisis that "Laudato si" presented a unique position difficult to align with either sustainable development or degrowth. Despite some similarities in the degree in which population growth was seen as a contributing factor to environmental degradation the encyclical's assertions remain singular. Within the affluence category "Laudato si" and degrowth share many similarities in positions pertaining to foundational issues of economic growth and consumption. When it came to the science and technology category it was difficult at times to delineate each position due to moments of overlap of all three. However the comparative analysis of the subcategories that emerged placed the position of the Vatican closer to that of degrowth than sustainable development. The fourth and final category reaffirmed a foundational similarity between the positions expressed in "Degrowth" and "Laudato si". Their approach seems to extend outside the limits of the present economic paradigm and is based on re-imagining some of the core concepts of the current environmental discourse that will in turn enable a paradigm shift.

The similarities between "Laudato si" and "Degrowth" on many important issues discussed within the international environmental discourse that emerged as a result of my analysis show that the Catholic Church more often than not assumes the position of a critic when it comes to the mainstream approach of sustainable development. Such a role allows it

to pose radical questions and question some of the core assumptions of the international conversation on the environmental crisis that are often taken for granted. As such it can lend legitimacy to the degrowth approach on a number of issues and consequently aid its transition towards the center of today's environmental, but also economic, social and political debate. Opening the conversation up to more drastic approaches that call for truly alternative modes of existence and socio-economic organization, based on an entirely different set of beliefs about progress and well-being, is another consequence that could arise from this potential, yet unexpected, alliance. Recognizing the similarities between these two approaches suggests that the need to step outside the box and completely rethink the way we've been and continue to engage the environmental crisis is a legitimate one, and not expressed by a marginal and radical minority. Such a recognition could have lasting implications for future environmental, but also economic and social strategies and policies.

Due to the relatively recent publication of the encyclical the potential for further research is immense. Similarly, a comparative analysis between the different currents of sustainable development that have emerged in the past years and "Laudato si" would probably yield different results and shed more light on other avenues of potential cooperation between these approaches.

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