Social representations about sustainable development: the perspectives of residents of small islands' cities

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Abstract: Sustainable development (SD) is one of the goals of contemporary society, underlining the need of its collective redefinition and social and personal appropriation. For this, it is relevant to analyze how individuals understand the process of building sustainability. The social representation of the SD of an intentional sample of 64 stakeholders from five Azorean cities was explored through prototypical and similarity analysis of a free association of words. The data were analyzed using the programs Evocation 2003 and IRAMUTEQ and interpreted according to the structural approach of social representations. The resulting representation identifies the three classic pillars of the SD, as well as its main challenges and strategic options. The economic pillar held a central place, interconnecting both with the environmental and the social pillars, although the latter showed less emphasis. It is important to keep monitoring the evolution of this SD representation, that appears to be more sophisticated than other notions found in similar studies.

Keywords: Azores (Portugal); economy; environment; governance; society.

1. Introduction

Participatory management has been considered a key element in the promotion of sustainability; it is characterized by involving the different stakeholders in the policy-making processes and in their implementation (IAP2, 2014). In this sense, governments have been exploring new ways to include citizens and civil society organizations in the formulation of public policies (VASCONCELOS, 2015). In fact, the commitment to sustainable development (SD) – reaffirmed at the International Conference on Small Island Developing States in Samoa (UN, 2014) – assumes the need for a broad alliance including people, governments, civil society, and the private sector, working together to achieve a desirable future.

However, citizens' voices have been little heard about what SD means to them and what specific goals it should address. While the widely surveying citizens on development models and the consequent incorporation of their perspectives into decision-making is not an easy task, the empowerment that ensues from those responsibilities is a necessary condition for the delivery of policies that help manage sustainability.

In this research line it becomes relevant to understand how the citizens of some cities in the Azores understand SD and eventually how they put it into perspective in the local context, even more so since very few studies have explored these issues. As part of a larger research project on the identification of development problems and goals in small and medium sized island cities (FUENTES SÁNCHEZ et al., 2021), this study sought to unveil the social representation (SR) of SD of residents in five Azorean cities: Ponta Delgada, Ribeira Grande, Angra do Heroísmo, Praia da Vitória and Horta. Presently, studies carried out in islands enjoy a growing and wide recognition, as islands have been considered small-scale research laboratories, very useful to test strategies and theories (e.g., social network theory) and to observe regional and national identity dynamics and the affirmation of their cultural specificity (GIL, 2016; ICEF7, 2018).

2. Theoretical framewor

2.1 Sustainable development: between social desirability and conceptual ambiguity

In the third quarter of the 20th century, the publication of several reference works as well as the first United Nations Summit on the Human Environment in 1972 (e.g., GABRIEL et al., 2014) mark the beginning of a reflection around SD linked, in a first moment, to the impacts of human action on the environment.

Enunciated since 1987 as having the imperative to meet "the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p.43), SD, far from being consensual, continues to prove to be an ambiguous concept, imprecise and difficult to operationalize, although recognized as essential for the future of humanity and the planet.

Despite this ambiguity, it is possible to gather a relative consensus around three

pillars of sustainability - social, economic and environmental - each of them with specific objectives and not always consonant with each other (Figure 1), but which should ensure their integrity, while concurring to a mutual integration (UN, 2015; LÓPEZ; ARRIAGA; PARDO, 2018). Commonly represented by three circles that only ensure sustainability in the intersecting space (e.g., VOSS; BAUKNECHT; KEMP, 2006), this model has become almost ubiquitous (CAMPBELL; HECK, 1999; JAMES; MAGEE, 2017; PURVIS; MAO; ROBINSON, 2019).

The environmental dimension considers the carrying capacity of a system (ecosystem) and refers us to problems such as the rate of biodiversity loss, changes in biogeochemical cycles, and climate change, among others (LIU et al., 2015).

The social dimension focuses on the quality of life in different communities and is related to social cohesion and the affirmation of cultural diversity, the quality of interpersonal and institutional relationships and democratic participation (MCKENZIE, 2004). Poverty, hunger, equity and social justice stand out as the main intervention areas (CORTES, 2001; UN, 2015).

Figure 1 – Pillars and objectives of sustainable development according to the three P's model of sustainability (People, Planet and Prosperity).
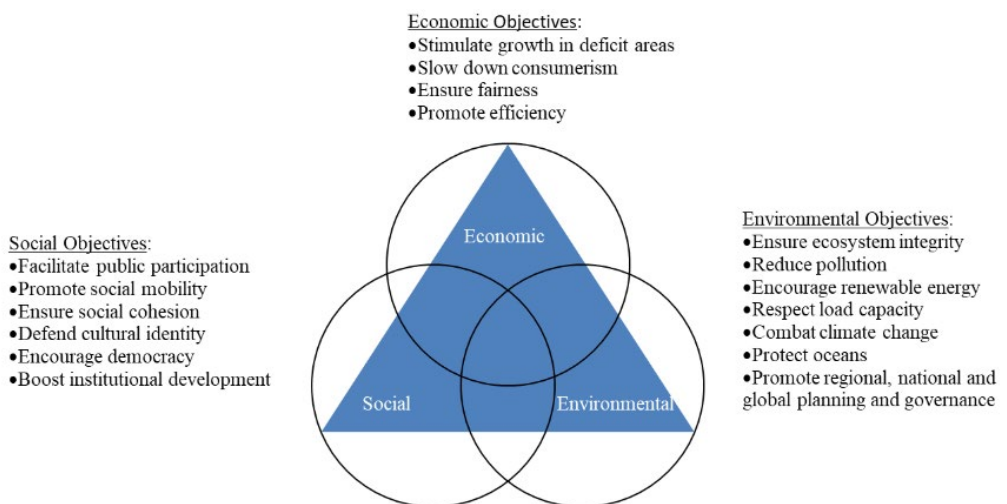
Source: Modified from Campbell and Heck, 1999.

The economic dimension is considered to be concerned with a socially just distribution of resources, the efficiency of their management and the production of alternative resources so that all citizens, now and in the future, benefit from an adequate material standard of living (CAMPBELL; HECK, 1999).

Other proposals, with considerably less consensus, conceive SD based on four or

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five pillars, either proposing the addition of new dimensions or partially reformulating the original 'triangle'. These include, for example, the following dimensions:

- "institutional", referring to human interaction, the rules by which it is managed and materialized in institutions, which appears in four-dimensional models and is adopted, for example, by Dawodu, Akinwolemiwa and Cheshmehzangi (2017) and Valentin and Spangenberg (2000);

- "governance", emphasizing citizen participation in decision-making and the negotiation and production of more responsible and less conflictual solutions, which occurs in some four-dimensional models (e.g., SCHMIDT; TRUNINGER; GUERRA, 2017; VOSS; BAUKNECHT; KEMP, 2006);

- "cultural", translating the "ability to preserve cultural identity, as well as allowing changes according to cultural values", which appears in other four-dimensional models (e.g., TONKOVIĆ; ZLATAR, 2014, p. 2).

Additional conceptual proposals mainly involve the reformulating and/or decomposing the social pillar into several variants, into four-dimensional models such as, for example, that of James and Magee (2017) which includes "ecology", "economy", "politics" and "culture", or five-dimensional ones such as that proposed by Bervar and Bertoncelj (2016), which includes in addition to the "ecology" and "economy" dimensions, the "culture", "security" and "equity" dimensions, operationalized in the following terms:

- "politics", underlining the need to reflect on which are the regulatory forces that ensure the prevalence of the common good in the development process (e.g., market, state, democratic participation) (FREY, 2001), the effectiveness and efficiency of systems of political organization and the relationship between powers;

- "culture", understood here as cultural well-being through intercultural dialogue (BERVAR; BERTONCELJ, 2016);

- "security", emphasizing, at the geostrategic level, the peace and stability of social systems (e.g., BERVAR; BERTONCELJ, 2016); and

- "equity", corresponding to a reformulation of the "social" pillar, which emphasizes the well-being of societies through social cohesion (e.g., BERVAR; BERTONCELJ, 2016).

Other, more inclusive and plural, ways of conceiving SD move away from the original three "P" model ("people", "planet", "profit"), or from the five "Ps" ("persons", "profit", "planet", "participation", "peace") proposed in the 2030 Agenda; the model of Seghezzo (2009), is a case in point. It proposes three pillars: "Place", "Permanence" and "Persons", in which the first refers to the physical, geographical and culturally constructed dimensions of the spaces and places where we live and interact; the second, highlights the dimension of the temporality of the effects of our actions, largely neglected in the sustainability debate; and the third highlights the idiosyncratic aspect of "persons" as individual human beings – a perspective absent from previous models, in which they were approached as indistinct members of society.

However, as James and Magee (2017) point out, modifications to the three-pillar model are rarely accompanied by a reflection and justification on the reasons behind them. Moreover, many of the proposed dimensions reveal an undifferentiation between pillar, goal (e.g., equity), domain or area of intervention (e.g., policy) and/or strategic option (e.g., governance) which may obscure the role played by the pillars, as necessarily interactive structures, or foundations, in the definition of SD.

Regardless of the model, the concept of SD enjoys widespread acceptance among social actors belonging to very different spheres (economic, political, social) and with discordant or even opposing interests and agendas, lending itself to partial or even sectoral interpretations. However, this ambiguity and its "paradoxical nature" (LÓPEZ; ARRIAGA; PARDO, 2018, p.26) do not only represent a weakness, but also a potentiality to be explored. The underlying contradictions involving the SD concept bring great richness to social dialogue, since the uncertainties surrounding this notion claim not only the conceptual deconstruction continuously debated among experts, but also a social co-construction, which seeks to "bring different problematics and interests closer, paving the way for new forms of relationships" (CHAVES; RODRIGUES, 2006, p.103).

2.2 Social representations of sustainable development

In order to foster the evolution and improvement on quality of life, it is essential to include different social actors in an active public participation; this inclusion involves not only probing their opinions and sensitivities on SD-related aspects, but also effectively empowering them in management decisions, using a logic of participatory governance (VASCONCELOS, 2015). In this sense, several studies conducted within the scope of social representations (SR), have sought to interpret the views of citizens and social groups that integrate local neighborhoods, detecting trends in the issues and concerns that mark the feeling of the communities at a given time. Some of the most explored areas, in this sense, have been education (e.g., MELO, 2017) and health (e.g., BRITTO et al. 2015).

Although there are some investigations, the SRs about SD have been comparatively less analyzed. Among those studies, most have studied the perspectives of university students or professors, coming from different training areas (TECHIO; GONÇALVES; COSTA, 2016), or from different countries (RAMOS; KAWAMURA, 2009; BARTHES; JEZIORSKI, 2012; MATOS et al., 2012). The focus of these studies around the university population restricts the representativeness of the results since a wide probing of the views of different stakeholders it is not adequately ensured.

Moreover, there the purposes of the different research studies are diverse: some aim to identify the existing meanings of SD (e.g., TECHIO; GONÇALVES; COSTA, 2016; MATOS et al, 2012; RAMOS; KAWAMURA, 2009); others, intend to verify if the nationality of the participants (BARTHES; JEZIORSKI, 2012) or their area of training exert influence on the representations found; others, still, intend to detect the presence of contents related to Environmental Education in the surveyed representations of SD (FLORES; ROJAS, 2013; PONS-GUTIERREZ, 2013).

From one study to another, the categories of meanings of SD found by the re-

searchers vary considerably. Some studies, situated at an inter-individual analysis level (RAMOS; KAWAMURA, 2009; FLORES; ROJAS, 2013; PONS-GUTIERREZ, 2013), arrive at typologies of sustainability, while the others, in a more global analysis, seek to identify the collective SR of a given group. The typological diversity is quite evident when we compare the systems proposed by Ramos and Kawamura (2009) – *simplified sustainability, sustainability of resources, natural environment' sustainability, resource and natural and human sustainability* – by Flores and Rojas (2013) from the classification carried out by Gudynas (2009) – *weak, strong and super-strong sustainability* – or by Pons-Gutiérrez (2013) – *intergenerational sustainability, ecological sustainability, equilibrium sustainability, economic sustainability, sustainability as a local project and/or sustainability as a government program.*

However, the perspectives described in the various studies, show, in general, the prevalence of the environmental aspect over the social and economic aspects of sustainability (BARTHES; JEZIORSKI, 2012; MATOS et al., 2012; TECHIO; GONÇALVES; COSTA, 2016). This prevalence may be associated with the emphasis given in the academic pathway to the finitude of resources in the transition to the new ecological paradigm (e.g., SILVA; GABRIEL, 2009).

On the other hand, the perspectives of the students surveyed by Ramos and Kawamura (2009) show that the more complex views – and which reveal sustainability embedded in a social, economic and environmental context – are much less frequent (only nine out of 78 respondents) than the more simplified ones; and even then, they still present difficulties in integrating social values and inequalities into sustainability[1].

In order to draw a more comprehensive picture of the SD perspectives present in the Azores, the current research diversifies the participants' age and work attachment and covers residents from five cities in this region. The following questions guide the analysis:

- Is there an SR of SD among the participants of this study? If so, what are their contents and how is this representation structured?
- What problems, aims and action strategies are present in their SD perspectives?
- Is there a homogeneous representation of SD or does it differ according to the role that the participants play in society?
- To what extent do the detected representations of SD corroborate or diverge from those found in similar studies?

3. Methodology

3.1 Study context: the Azores archipelago and the political priorities of regional sustainable development

The Azores are located in the North Atlantic Ocean, *circa* 1500 km from Europe, 1450 km from Africa and 3900 km from North America, and comprise nine islands,

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1 - The study of Ramos and Kawamura (2009) differs from the others in the collection and analysis procedures used, resorting to two open questions whose data are subjected to content analysis.

located over 600 km (Figure 2).

In the last census, the population of the Azores totaled 246,772 inhabitants (121,534 men, 49.25%), with a population density of 106.3 inhabitants/km² (SREA, 2012). Three islands, São Miguel (56%), Terceira (23%) and Faial (6%), concentrated, at the time, 85% of the total population of the archipelago. The unemployment rate (11.1%) and activity rate (46.6%) were slightly lower than the national averages (SREA, 2012).

Figure 2 – Map of the nine islands making up the Autonomous Region of the Azores (Portugal)
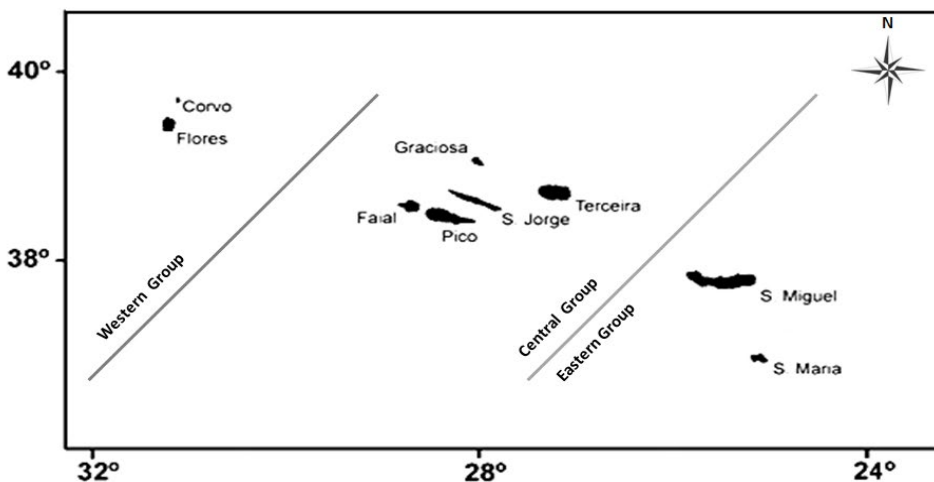
Source: Map prepared by the authors, 2020.

The Azorean cities in which the study was carried out have very different geographical dimensions, population densities and business volumes (Table 1).

Ponta Delgada stands out for its high economic potential, being larger, with a higher population density and with a more dynamic labor market than all the others, which contrasts mainly to Horta (Faial Island). Angra do Heroísmo (Terceira Island), the first city of the Azores and a world heritage site, saw its supremacy decline over time, in demographic, strategic, economic and cultural terms. Its good performance in terms of social sustainability is especially opposed to Ribeira Grande (São Miguel Island), a city with the highest illiteracy and unemployment rates together with the lowest aging index. Finally, Praia da Vitória (Terceira Island), with the lowest number of inhabitants, appears to have the best environmental performance, with the largest green area and the lowest urban waste per person.

Table 1 – Summary characterization of the Azorean cities selected for this study

SUSTAINABILITY INDICATORS		SÃO MIGUEL		TERCEIRA		FAIAL
		Ponta Delgada	Ribeira Grande	Angra do Heroísmo	Praia da Vitória	Horta
General	[1] Population	40.661	12.663	8.654	3.958	5.553
	Male | Female	19.526 | 21.135	6.283 | 6.380	4 065 | 4.589	1.904 | 2.054	2.593 | 2.960
	[1] Metropolitan area (km²)	20,6	8,3	4,8	3,7	2,9
	With status of city since:	1546	1981	1534	1981	1833
Social	[1] Population density (inhabit./km²)	1974	1526	1803	1070	1915
	[1] [#] Ageing index	73,75	45,45	164,31	95,25	128,24
	[4] Degrees of the University of the Azores in 2018/19 (Prep |B.Sc.|M.Sc.|Ph.D.)	5|17|19|5	0	2|3|5|2	0	0|1|1
Economical	[1] Unemployment rate of the resident population aged 15-24 years old (%)	35,99	36,36	29,77	33,02	26,36
	[2] Nights spent in Hotels per 100 inhabit. *	879,5	–	278,8	199,2	505,9
	[3] Distance to the nearest airport	3,9	23,9	24,7	3,7	10,1
Environmental	[3] Green area approximate (km²)	0.34	0.013	0,03	0.12	0.08
	[2] Water consumption (m³) *	6 053 521	2 080 270	3 357 584	1 596 575	1 710 547
	[2] Urban wastes collected per inhabitant (kg/inhab.) *	559	482	730	464	552

(*) Indicator for the municipality.

(1) Source: INE-Inst. Nacional Estatística. Portuguese Cities: A Statistical Portrait - 2011, 2014

(#) Ageing Index: ratio of population aged 65 years and over to the population under 15 years old.

(2) Source: SREA, Regional Statistical Office of the Azores

(3) Source: Google Maps

(4) Source: University of the Azores, http://novoportal.uac.pt/

Similar to other peripheral island regions, the economy of the Azores has strong outsourcing and high dependence on the outside, dealing with problems arising from insularity, territorial fragmentation, economic dependence, and a highly simplified market, with few exportable goods and services (GIL, 2016). Apart from the public sector, trade, transport and accommodation and catering activities represent the main economic drivers, but fishing and agriculture continue to prove fundamental, with the dairy market as the most dynamic sector; tourism is considered an emerging specialization sector (PE, 2017). According to the Regional Government, the Azores has recorded a three-year increase

in GDP higher than the national average (2.0% vs. 1.4%) (PE, 2017).

In the last decade, the regional public policies have tried to face some problems that challenge sustainability in the Azores, such as general low qualification, school dropout and youth unemployment, which reveal structural social weaknesses that hinder development. Indicators relative to very diverse areas also show evidence of the relevance given to sustainability in the regional goals. Among them, some of the most important are further highlighted:

- in 2011, SD was included, alongside "Azoreanity", as a transversal element throughout the Azores Regional Basic Education Curriculum (CREB); also in 2011, the Azores Natural Parks were created followed by the production of the legal regime for nature conservation and biodiversity protection (DLR nº 15/2012/A of 2 April);
- in 2017, provision by the government of the 'Azores Sustainability Primer' to drive societal transformation and catalyze buy-in and change in practices across different sectors;
- between 2007 and 2016, certification by UNESCO, of the Vine Culture Landscape (Pico Island) and Biosphere Reserves (Graciosa, Corvo and Flores Islands and the 'fajãs' of São Jorge), in addition to 13 Ramsar sites and the Azores Geopark;
- in 2016, certification of the quality of autochthonous products through the creation of the Azores Brand, promoting SD and the preservation of Azorean heritage and culture;
- in 2019, certification of the Azores as the first archipelago in the world to be considered a "sustainable tourism destination" by the *Global Sustainable Tourism Council.*

The investment around the operationalization, problematization and evaluation of the impacts of SD in the Region is also present in scientific production, translating into several publications and supervision of scientific research. A search in RCAAP, containing "sust"+"azores" in the abstract of articles in scientific journals, resulted in 39 records relating to eight areas of social intervention, highlighting the sectors: Marine Resources (14), Tourism (7), Agriculture and Planning and Management (6 *ex aequo*). It is in the latter that more research explores the perspectives of stakeholders, although none of these studies focused on their representations about sustainability or SD.

3.2 The social representations approach as a theoretical and methodological framework

Social Representations are understood as a mode of knowledge, socially elaborated and shared (JODELET, 2003), which are actively reconstructed by the subject and perform crucial functions in the elaboration and communication of reality, forging society, and the identity of each of us (MOSCOVICI, 1978). Being a product of interaction, SRs try to explain the world and social objects according to what a community shares about them

(MACHADO; ANICETO, 2010). Moscovici (1978), states that the content of a SR results from the activity of the subject about the world and, reciprocally, of the environment about the individual, so it is a good vehicle to access how, in a given social context and historical moment, a phenomenon such as SD has been revealed and appropriated by the different interlocutors through their discourses and actions.

The Central Core Theory (CCT) (ABRIC, 2003) emphasizes the structural dimension of SRs, seeking to understand the nature and functions that the systems of interconnected cognitions ensure in a representation. The operativity of the CCT results from the possibility of apprehension of the structure of relations between the knowledge, opinions, attitudes, and beliefs that constitute the SR of an object or phenomenon socially valued (MACHADO; ANICETO, 2010; ABRIC, 2003). For the CCT, the SR is formed by two systems of cognitions – the central and the peripheral systems – organized by combining the frequency and order of evocations in a "four-quadrant structure", where each part has a specific and complementary role, operating as an entity (ABRIC, 2003).

The central system, in the first quadrant, comprises the cognitions that determine the identity of the representation, i.e., what distinguishes it from others, and its functions are to give stability and organize its elements. The central cognitions are more frequent and more readily evoked (ABRIC, 2003), and constitute the most consensual and stable part of the SR and the part which is less dependent on the context (BRITTO et al., 2015). The non-core elements constitute the peripheral system, usually composed of *scripts of* concrete practices (WACHELKE; WOLTER, 2011), with a more functional and descriptive nature and therefore more definite and with less flexible meanings. These occupy the remaining quadrants, where the contrast zone (lower left quadrant) aggregates readily evoked but infrequent elements, which may signal an alternative representation, possibly in competition, with the one expressed in the core; the first periphery (upper right quadrant), includes frequent terms, that serve as a protective belt to the central core; and finally, the second periphery (lower right quadrant) contains the elements considered less important, more idiosyncratic and context-dependent.

In the interest of unravelling what is common in the SD perspectives of citizens living in cities of the Azores, it was decided to link this study to the methodological approach of SRs.

3.3 Methodological approach to data production and analysis

Individual semi-structured interviews were conducted as part of a broader project (FUENTES-SÁNCHEZ, 2013; FUENTES-SÁNCHEZ et al., 2021), which began with the application of a free Word Association Test (WAT). The projective nature of the information triggered with inductive stimuli constitutes its main added value and explains its wide application in the field of SRs (NEVES et al., 2014). In this study, of exploratory nature, "SD" corresponds to the inductive term elicited by the question "What are the first words that occur to you when talking about SD?". The subjects were able to answer intuitively, indicating all the words and expressions they wished, and which were listed in the order of evocation.

The resulting corpus of evocations was subjected to reduction procedures to the most frequent terms by synonymy (e.g., plurals), reducing divergences and resolving ambiguities (WACHELKE; WOLTER, 2011). The database was subjected to several analyses to explore the semantic field extension of the SR, build a hypothesis of its internal organization through a prototypical analysis, and test it through a similarity analysis. This plural methodological approach allows us to deepen the understanding of SR, robustizing the validity of its findings (ABRIC, 2003).

To appreciate the extent of the semantic field, three indices were calculated: Fluidity (total number of evocations), Amplitude (number of different evocations) and Richness (ratio between amplitude and fluidity) (POELSCH; RIBEIRO, 2010).

The data coming from the free word association test were processed using the *freeware* program EVOC (*Ensemble de Programmes Permettant L'Analyse des Évocation)*, version 2003, which arranges the terms evoked in four quadrants, according to the crossing of frequency with the mean order of evocations (MOE) (VERGÈS, 2002). To guarantee the inclusion of at least two thirds of the evocations, we considered all the words that appeared more than once (n=147; 69,3%); the cutoff frequency used to determine the quadrants corresponded to the median, and the MOE to the first quartile.

The same data were subsequently subjected to a similarity analysis, with the software IRAMUTEQ (*Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires*) developed by Ratinaud in 2009 (CAMARGO; JUSTO, 2013). The similarity analysis is based on graph theory and identifies the organization of the various elements of the representation through their degree of connectivity (ALVES-MAZZOTI, 2007), resulting in a maximum tree that indicates the organization and associative power of the SR elements.

3.4 The participants

A total of 64 individuals participated in this study, intentionally selected by maximum variation (PATTON, 2002), to explore the diversity of perspectives among different socio-cultural segments of Azorean society. A stratified sample of 13 persons including three members of local government (municipal council employees), three members associated with education and/or research, two shopkeepers, two representatives of non-governmental organizations and three citizens from groups with less "status" (emigrants, pensioners, housewives, unemployed) was interviewed in five cities of three Azorean islands. The study carried out in 2011, was disseminated by convenience, via e-mail and word of mouth, and the first citizens from each segment who made themselves available for the study were interviewed in person.

The composition of the group of participants proved to be more balanced in terms of gender (31 women and 33 men) than age composition or academic qualifications. Thus, half of the group is aged 35-49 (54.7%), 29.7% are aged 19-34 and 15.6% are aged 50 or over. The majority of respondents are university graduates (57.8%), and almost a fifth (18.8%) have even higher education qualifications (masters, doctorates, or post-doctorates); less than a quarter have a high school education (23.4%).

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4. Analysis and discussion of results

In response to the inductive term SD, the 64 participants produced a total of 212 evocations (fluidity), 93 of which were distinct (amplitude) after the homogenization of synonyms, which corresponds to an average amplitude of 3.3 words per person. This amplitude suggests a non-uniform SR, which is corroborated by the median value of the richness index (ir=0.44), which reveals the unstructured nature of a SR in which meanings are only partially shared within the group. The terminological dispersion of the *corpus* is so great that, removing from analysis the terms with frequencies less than two, we are left with only 29% of the terms that initially composed it. Comparisons of the frequencies of evocation of the most common terms in each potentially predictor variable (gender, age group, professional occupation, city, and island of origin) using the chi-square test did not reveal any significant differences, suggesting the existence of an ensemble representation. This information apparently contradictory with the high dispersion values found, may be reconciled since there is a homogeneous core and many unshared terms. Techio and colleagues (2016) also did not find a significantly different relationship in the SRs of SD among university students from different majors.

The results of the prototypical analysis, evident in the four-quadrant structure (Table 2), express the content and structure of the SR for the inductive term SD. The central core, upper left quadrant, aggregates the terms "environment", "economy" and "balance". The latter, with a lower order of evocation, conveys a key idea of SD, indispensable in weighing up social desiderata which are of antagonist nature. The two most frequent terms correspond to two of the three classical pillars of SD (CAMPBELL; HECK, 1999).

In the first periphery, upper right quadrant, there is only a single term, "society" (n=10, MOE=3.100), which refers to the third pillar of sustainability, less valued than "environment" and "economy", both in the central core. The controversy generated around this dimension and their inherent principles has hindered its internalization, plausibly contributing to a lower assertion and dissemination (FOLADORI, 2002), also evident in these results.

New meanings are summoned for the collective notion of SD in the 12 terms found in the contrast zone. Essential elements of sustainability, including "resources" and tools such as "management", "employment" and "education", produce desirable social impacts focused on "quality of life", "development" and "growth", reportable, possibly, to a "future".

The second periphery brings together various elements that correspond for the most part to strategic options for promoting SD (e.g., "entrepreneurship", "protection") and details some resources (e.g., "water", "energy").

Table 2 – Table with the four-quadrant structure of the inductive term "Sustainable Development" for five cities in the Azores (N=64; Freq. = Frequency; MOE = Mean Order of Evocation)

	CENTRAL NUCLEUS			FIRST PERIPHERY		
	Word	Freq.	MOE < 2,5	Word	Freq.	MOE ≥ 2, 5
n≥10	Environment	19	1,95	Society	10	3,10
	Economy	19	2,32			
	Balance	12	1,58			
n<10	Resources	8	2,00	Protection	7	2,57
	Future	8	2,25	Energy	6	3,50
	Employment	5	1,60	Permanence	4	2,50
	Development	5	2,20	Culture	4	3,00
	Quality of life	4	1,50	Generation	3	2,67
	Nature	4	2,00	Entrepreneurship	3	4,33
	Citizenship	3	1,67	People	2	2,50
	Management	3	1,67	Welfare	2	3,00
	Productivity	3	1,67	Tourism	2	3,00
	Growth	2	1,50	Industry	2	4,00
	Education	2	1,50	Water	2	4,50
	Ecology	2	2,00	Policy	2	5,00
	CONTRAST ZONE			SECOND PERIPHERY		

Source: Table prepared by the authors, 2018.

It can be seen that many of the terms found in the results of the structural analysis of the evocations are equivalent, differing mainly in the quadrant they occupy in the framework of the four houses. Thus, in Techio and collaborators (2016), the words listed in the central core and in the first periphery ("environment", "medium", "nature", "preservation", "recycling") underline the environmental dimension, although, in the first periphery, terms relating to the economic dimension ("development", "economy") or the social aspect ("awareness") also appear. Likewise, in Matos and collaborators (2012), terms such as "responsibility", "awareness" and "innovation" are added to the term "environment" in the central core, referring us to the social dimension of sustainability, while terms relating to the economic strand only appear in the contrast zone. On the other hand, in Barthes and Jeziorski (2012), it is found that the environmental strand of SD is highlighted in students of the three nationalities studied, although social concern diverges with nationality.

The representation of SD focuses on purposes, dimensions, strategic options and impacts necessary to achieve it, and terms related to problems typically related to sus-

tainability, such as, among others, poverty, consumerism, or biodiversity erosion, are not evoked, even though the anthropic pressure caused by tourism in the Region is a threat recognized both by citizens (MONIZ; SIMÃO, 2019) and researchers (e.g., HODGETTS et al., 2019). In fact, also in other studies (e.g., MATOS et al., 2012; TECHIO; GON-ÇALVES; COSTA, 2016) neither problems nor barriers to sustainability characterize SD SRs.

The essential meaning of the SR becomes more comprehensible after performing similarity analyses which can clarify how the identified elements are grouped and organized among themselves. However, in none of the previously conducted research on SD SRs have these analyses been carried out.

In the present work, the maximum similarity tree (Figure 3) corroborates the weak lexical breadth of the SR and highlights two groups with a star structure around the binding elements "economy" and "environment" and a third filamentous one, with tenuous internal relations.

Here, "society", which occupied the first periphery in the prototypical analysis, joins "economy", moving away from the environmental dimension. With those, several aspects concerning development models, and economic activities (e.g., "growth", "entrepreneurship", "tourism", "culture") emerge, as well as the valorization of inclusive and politically reflected social dynamics. This group only interconnects with the "environment" group via "economy", showing that society's relationship with these two dimensions is not introjected into the SR. The representation of the "environment" appears more structured around the concerns with its "protection", also present in Techio; Gonçalves; Costa, (2016), and the effective "management" of "resources" through "education" and the creation of green "jobs".

The filamentous group expects that in the "future" the SD will guarantee to the next "generation"(s) the "preservation", the "maintenance", the "permanence" and the "continuity" of a heritage which is not specified here, but which could contemplate material and immaterial dimensions. This tenuous thread is betting on SD as a strategy to promote the "quality of life" and the "well-being" which does not accept losing what is good about the past, evidencing a concern for cultural identity particularly present in "Azoreanity" (PIRES, 1997). The distancing of this group corroborates the inexistence of an internalization of social values and principles in this SR of the SD.

Figure 3 – Maximum similarity tree indicating the organization and associative power of the evocations of the social representation. The strength of the link is represented by the thickness of the edges and the number of co-occurrences expressed in them (fc)
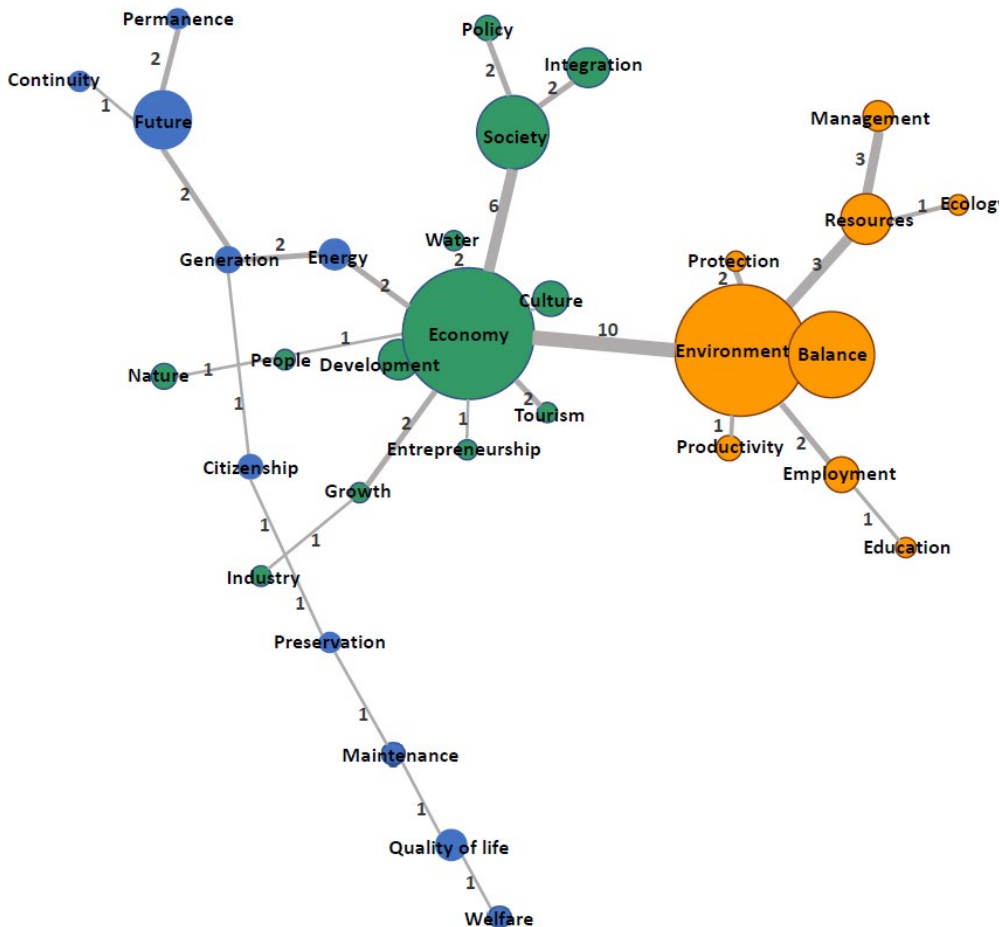
Source: Prepared by the authors, 2020.

The environment proves to be the key dimension in the results of the reviewed studies, occupying the central core in structural analyses (TECHIO; GONÇALVES; COSTA, 2016; MATOS et al., 2012), leading the frequencies (BARTHES; JEZIOR-SKI, 2012), permeating the categorizations of Ramos and Kawamura (2009), while in this research it constitutes an agglutinating term of a group that is autonomized in the similarity analysis (Figure 3).

However, in this research the three dimensions historically associated with sustainability appear enunciated, with the collective imaginary valuing the need for a balance

between them. Although the social aspect is less highlighted, since it does not figure in the central nucleus and appears aggregated to the economic aspect in the maximum likelihood tree, the issues associated with it are quite present. These differences may be related to the heterogeneity of the social roles played by the participants of this study in relation to the homogeneity of the samples of other research papers.

It is also noted that in this SD SR the dimensions that different experts have sought to add to the three-pillar model, constitute terms that only gravitate around the two main SD cohesive agents: environment and economy. The inclusion or exclusion of various dimensions in the concept of SD is associated with different theoretical perspectives. However, in order to negotiate more generalized meanings of SD in society, with a view to streamlining everyone's involvement in its construction, it is essential to continue to investigate different groups of stakeholders (e.g., age group, country, background, activity) that reveal how their SRs are being constructed in practice.

5. Conclusions

The conceptual dispersion around the concept of SD is still very present in the literature and also, little is known about the perspectives of different stakeholders. However, promoting sustainability requires exploring what populations think, need, and want to ensure that local development policies and strategies can be successfully implemented (SCHMIDT; TRUNINGER; GUERRA, 2017).

Unlike other studies, the representation found in this research centers around the three classical pillars of SD and its main challenges and strategic options. The location of many of the meanings that populate it suggests an evolutionary trend of the SR that contemplates the promotion of quality of life, yearning more egalitarian conditions and proposing the instruments and strategies to achieve them, as well as the idea of preserving the future for new generations.

However, the prevailing idea does not seem to introduce the simultaneous interpenetration of environmental, economic, and social concerns and needs, standing a step back, since it generates only partial interrelationships. Thus, the economic pillar is highlighted, interconnecting with both the environmental and social pillars, although the latter is less expressive, while there are no links between the environmental and social elements. These pairwise interrelations are reminiscent of the fair and viable community models proposed by Tanguay and collaborators (2009).

Furthermore, in the conveyed SR there are no meanings in which the identity with the inhabited place, its heritage, its problems, and yearnings shine through. Instead, one finds a generic representation which, in line with the scientific discourse, from which retains its universal principles and classical dimensions.

New research, using more diverse samples, as happened in this study, but with larger contingents per sector, different universes (e.g., age stratification), or complementary methodologies (e.g., BRUNEL et al., 2018; FUENTES SANCHEZ et al., 2021), will allow us to gauge the validity of these results, expand their meaning and monitor the evolution

that they will necessarily undergo.

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Representações sociais acerca do desenvolvimento sustentável: as perspectivas de residentes de pequenas cidades insulares

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Resumo: O desenvolvimento sustentável (DS) figura entre as metas da sociedade contemporânea, sublinhando a imprescindibilidade da sua redefinição coletiva e apropriação social e pessoal. Para isso é relevante analisar como é que os indivíduos apreendem o processo de construção da sustentabilidade. A representação social do DS de uma amostra intencional de 64 stakeholders oriundos de cinco cidades açorianas foi explorada através de análises protótipica e de similaridade de uma associação livre de palavras. Os dados foram analisados recorrendo aos programas Evocation 2003 e IRAMUTEQ e interpretados de acordo com a abordagem estrutural das representações sociais. A representação resultante identifica os três pilares clássicos do DS, os seus principais desafios e opções estratégicas. Salienta-se o lugar central da vertente econômica, interligada com a ambiental e a social, embora esta última tenha menor ênfase. Importa acompanhar a evolução desta noção de DS que parece mais sofisticada do que as encontradas noutros estudos.

Palavras-chave: Açores (Portugal); ambiente; economia; governança; sociedade.

Representaciones sociales sobre el desarrollo sostenible: las perspectivas de residentes en pequeñas ciudades insulares

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Resumen: El desarrollo sostenible (DS) figura entre las metas de la sociedad contemporánea, recalcando la necesidad de su redefinición colectiva y apropiación social y personal. Para ello es relevante analizar cómo los individuos aprenden el proceso de construcción de la sostenibilidad. La representación social del DS de una muestra intencional de 64 stakeholders oriundos de cinco ciudades azorianas, fue examinada a través del análisis prototípico y de similitud de una asociación libre de palabras. Los datos fueron analizados usando los programas Evocation 2003 e IRAMUTEQ, e interpretados de acuerdo con el enfoque estructural de las representaciones sociales. La representación resultante identifica los tres pilares clásicos del DS, sus principales desafíos y opciones estratégicas. Destaca el lugar central del pilar económico, interconectado con el ambiental y social, aunque este último con menor énfasis. Importa acompañar la evolución de esta noción de DS que parece más sofisticada que las encontradas en estudios similares.

Palabras-clave: Ambiente; Azores (Portugal); economía; gobernación; sociedad.