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REATIVE ECONOMY IN THE REALM OF SUSTAINABILITY

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Abstract

This article aims to contribute to the debate of the creative economy in the context of sustainability, a not so explicit association found on the early writings on this topic. The interrelationships between the terms used in the literature to define creative economy (creative class, creative city, creative education, culture, economics and cultural and creative sciences) and eight dimensions of sustainability (environmental, social, economic, cultural, technological, ethical, territorial and political) are identified, in which the terms present another meaning. We conclude that a relationship between the creative and sustainable paradigms is a consequence, rather than a first intention, of the proclaimed paradigm to break away from the twentieth century models of development.

Keywords

Sustainable development. Intangible economies. Creative cities. Creative class. Cultural and creative industry.



A ECONOMIA CRIATIVA NA ARENA da sustentabilidade

Resumo

Este artigo tem como objetivo contribuir para o debate da economia criativa (EC) no contexto da sustentabilidade, uma associação pouco explícita que se encontra desde os primeiros escritos. O faz por meio da identificação de inter-relações entre termos utilizados na literatura para definir EC (classe criativa, cidade criativa, educação criativa, cultura, economia(s) e indústrias culturais e criativas) e oito dimensões da sustentabilidade (ambiental, social, econômica, cultural, tecnológica, ética, territorial e política), onde os termos encontram outro sentido. Conclui-se que a estreita relação entre o paradigma criativo e o sustentável é uma consequência, mais do que uma intenção primeira, da proclamada quebra de paradigma nos modelos de desenvolvimento moderno do século XX.

PALAVRAS-CHAVE

Desenvolvimento sustentável. Economia de intangíveis. Cidades criativas. Classe criativa. Indústria cultural e criativa.

INTRODUCTION

The association of the creative economy (CE) with sustainability, expressed in the notion of sustainable development, has been present since the first writings that sought to define it (Chart 1). However, there was doubt as to whether the discourse linking the two paradigms was something occasional or substantive. Among the first clues is the consensus that the "hybrid complex" (UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL

ORGANIZATION, 2013, p. 26) of the alliance between creativity and culture in CE is a powerful source of innovation. In the 21st century, especially in the urban environment, new technological platforms offer new ways of accessing and operating in the market and boosting cultural and creative sectors. These forms underline trends in the production and consumption chains in which the perception of symbolic (intangible) prevails over material (tangible) value.

The typical business models of the CE contrast with the conventional economic structures and organizations of the industrial era, whereas in society, which increasingly has immaterial labor, its innovations provide perspectives of justice, equity and inclusion. Typically urban, their impacts on the economy are marked by the high potential for capital, occupation and job turnover and by reducing the pressure for natural resources and initial investment.

The conceptual interpretations of the CE still provoke debates (Chart 1), and the classifications of creative industries (sectors) are countless (Chart 4). In the literature, terms are repeated to define CE - creative class, creative city, creative education, culture, technology and cultural and creative economy(ies) industries (sectors). This article aims to contribute to the debate by exploring the interrelation of these terms with eight dimensions of sustainability - environmental, social, economic, cultural, technological, ethical, territorial and political.

We conclude that the close relationship between the terms of the CE is more a consequence of debates in the realm of sustainability than its primary intention. The analysis supports the notion that the discourse associating the two paradigms stems from discussions about the finitude of natural resources and the increased valuation of culture that began in the 20th century. Driven by technology, the new economic paradigm is articulated around creativity, which is expanding in the 21st century.

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Origins and nature of the creative economy

The cultural recovery of Australia's Aboriginal peoples, which began in the 1970s, later inspired the formulation of the first CE policy, the Creative Nation: commonwealth cultural policy (AUSTRALIA, 1994). An important support in its formulation was The arts economy: 1968-1998, the first major study to measure and map cultural industries (AUSTRALIA, 1994; MADEIRA, 2014).

Considered ahead of its time, Creative Nation repositioned cultural sectors in the center of the economy and recognized Aboriginal cultural production as an Australian differentiator. This cultural policy addressed cultural production in a broad sense, as economic capital, and was clearly articulated with others, such as education, copyright, export incentives and tax benefits. Despite not explicitly naming the creative industry or CE, Creative Nation inaugurated the paradigm of culture and creativity as economic assets, as well as expanding the concept of culture by including television, radio, the media, heritage, cinema, traditional culture and cultural tourism among its sectors (AUSTRALIA, 1994).

Furtado (1978) is among the first and main references on culture and creativity as factors inherent to the contemporary conception of economic and social development. He, Touraine (1969) and Bell (1974), from their own perspective, distinguished the first signs of what analysts (Garofoli, 1987; Kumar, 1997; Harvey, 1995) would later identify as the emergence of new capitalist paradigms of post-industrial economic production, relating them to a new internationalization of capital (MADEIRA, 2014; VEIGA, 2008).

The beginning of creative urban occupation dates back to the 1980s/1990s, when successive crises in modern development models led the debates on sustainability. The creative cities movement is marked by the occupation and revitalization of old neighborhoods in central areas of industrial cities by the artistic class (LANDRY, 2013; VEIGA, 2008).

At the turn of the century, the creative paradigm rapidly expanded in the face of its direct economic benefits in staffing and share in the economy, under the attention of governments around the world. Among the various concepts of CE in the literature (Chart 1), Santos-Duisenberg recognizes that "certain economic, technological, social and cultural changes [at the turn of the century] have irreversibly transformed contemporary society" (BRASIL, 2011, p. 76). Reis (2008) reflects on social and economic issues and the paradigm shift in the relationship between economy, culture and technology at the service of creativity. Leitão (2012), in turn, focuses the CE concept on social sustainability. The Creative Economy Secretariat's Plan (BRASIL, 2012) recognizes the CE as an economy of the intangible, associated with economy of natural resources. The consensus is its original link with culture, which gives new impetus to cultural industries and broadens the perception of the economy of culture by adding dynamic high-tech sectors to the CE. Social (or productive) inclusion, recognition of the economic value of culture and intellectual and technological assets are all recurrent in the definitions (Chart 1).

Contemporary scholars (HARTLEY, 2005; REIS, 2008; 2011; TEPPER, 2002;

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Creative economy

Creative economy is an holistic and multidisciplinary approach, dealing with the interface between economy, culture and technology, centered around the predominance of products and services with creative content, cultural value and market objectives, the result of a gradual paradigm shift.

Creative economy encompasses not just creative industries but the impact of its goods and services on other economic segments and processes and the connections between them.

"This is a new way denomination increasingly affirmed in the discourse of the professionals involved in the cultural area in Brazil – government agents, producers, managers, among others – replacing that which is usually referred to as the cultural industry"

"The cultural activities, goods and services are of a dual nature, both economic and cultural, as they have identities, values and meanings , and should therefore not be treated as if their value was purely commercial".

"In contrast to the traditional 'Taylorist' economy, the CE is characterized by abundance, rather than scarcity, through social sustainability rather than through exploitation of natural and human resources, through productive inclusion rather than marginalization of individuals and communities."

"The CE is [...] the economy of the intangible, of the symbolic. It is nourished by creative talent individually or collectively organized in order to produce creative goods and services. As it is characterized by abundance and not by scarcity, the new economy has its own dynamic"

What we call the CE are those human manifestations linked to art in all its forms, whether from the creative artistic point of view in itself, such as painting, sculpture and the arts, or whether in the form of creative activities with a more market bias, such as design and advertising."

"It can be said that CE is the cycle encompassing the creation, production and distribution of products and services that use creativity, intellectual assets and knowledge as the main productive resources. They are economic activities based on combining creativity with techniques and/or technology, adding value to intellectual assets. It brings together talent and economic objectives. It is, simultaneously, a cultural asset and a marketable product or service incorporating tan gible and intangible elements endowed with symbolic value."

"CE's capacity to create new products and services overflows to other innovative activities in other companies and organizations in the same sector and in others, creating production chains, st rengthening innovation in other sectors."

"CE activities are at the intersection between the cultural, business and technological arts; those activities which include the cycle of creation, production and distribution of goods and services which make use of intellectual capital as an input.

<u>Creative Economy</u> by Hartley (2005) and <u>CE as a development strategy</u>, in two complementary approaches: "The first based on recognizing creativity [...] human capital promoting integration of social, cultural and economic objectives before an exclusionary – and therefore unsustainable – post-industrial global development model. In this old paradigm, cultural diversity and cultures in general can be seen as obstacles to development rather than nourishing creativity and res olving social and economic barriers. [...] The second approach shows how economic changes and, in particular, new technology alter the links in the chain between culture (from the arts to entertainment) and the economy, opening up a range or economic opportunities based on creative undertakings."

Chart 1 – Concepts of the creative economy from the point of view of different authors Source: Messias (2017, p. 178).

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VENTURELLI, 2000) unanimously recognize a confluence of factors (fragility of economic development models - for inclusion and sustainability -, globalization, new media and knowledge as the main economic asset) driving new social, cultural and economic dynamics. Due to the link between the CE and the public, non-profit and informal sectors, the economic domains, whose value goes back to the original sources of culture and knowledge, are rearranged (UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTU-RAL ORGANIZATION, 2013). The dialogue about the importance of cultural recovery as a CE asset is capable of promoting profound changes in the relationships governing the economy and local society in the globalized world in terms of values, personal preferences, lifestyle and work, and profile of consumption "(BENDASSOLLI; WOOD; KIRSCHBAUM, 2009, p. 11). Indicated as a postindustrial paradigm in this new economic cycle in which creativity is "a basic, differential and indispensable resource" (REIS, 2008, p. 18), the CE is an alternative for sustainable development responding to the limits of growth announced in the 20th century.

The terms that define the creative economy

Within the diffuse limits of concepts of CE, terms used to define it recur in the literature. Four of them refer to the confluence, in the CE, of four economic trends of the late 20th century associated with the dematerialization of the economy: the knowledge, experience, culture and the shared or collaborative economies.

In addition to the new economies, the authors also use other interrelated terms to conceptualize the CE, characterizing it in the territory, as they are typically urban: cultural and creative industries; creative clusters and hubs; creative cities; creative class; and creative education.

The new economies and the creative economy

The new economic terms inherited by the CE have in common greater perception of the value of intangibles over tangibles, widespread occupation of people - both in jobs and entertainment -, innovations in labor relations and through the expansion as technology becomes cheaper and more available.

The term *knowledge economy* emphasizes technology, quality and generation of property rights associated with intellectual work. It began to establish itself in the 1990s and was consolidated through the growing value of knowledge, information, artificial intelligence and networks in the economy. It provoked an adjustment in production and material consumption modes, which ceased to be the central object of consumption and becomes a means, and not the productive end (NASCIMENTO, 2012; REIS; URANI, 2011).

The term *experience economy* combines the dematerialization of consumption with the promotion of the relationship between human beings and their environment, prioritizing the value of access and experience, rather than

property. Its scope includes entertainment related to culture, leisure, tourism and sport. Talent, technology and collaborative processes are chosen here as the main factors of production and the arrival of the internet, a milestone in new forms of access to cultural goods and services (MADEIRA, 2014; REIS; URANI, 2011).

The term *culture economy* comes from the Frankfurt School (1930/40) theorists, who first related culture and economics. Since then, a systemic and broad view of understanding culture has been developed, perceived as a unique and intangible value for development and changes and "*la economía en Sí misma*" as one of its parts (UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION, 2013, p. 24). Movement, exchange and relationships in the productive and consumption chains of cultural goods and services are guided by cultural norms and predilections, which interconnect identities and real worlds (OLIVEIRA; ARAUJO; SILVA, 2013; UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION, 2013).

it comprises [...] the sectors of modern capitalism that meet consumer demand for entertainment, adornment, self-affirmation, social ostentation and others of great symbolic value (rather than a purely utilitarian purpose). Today's urban and regional economies contain a significant component of cultural economy. (UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION, 2013, p. 24).

The term *shared or collaborative economy* multiplies access to production, work and sale through collaborative rather than competitive practices. Its main characteristic is to bring together people with common interests and different knowledge, talents or skills around projects which enable currencies to be exchanged other than money. Production and capital goods have shared costs, relationships favor collaboration (in contrast to the hierarchical model of the industrial economy) and interactive platforms and virtual media enhance communication. These are typically urban, coworking or collective business models; and collective financing, such as crowdfunding, guided by creativity, innovation and intensive use of technologies. The predominance of services in the CE favors collaborative practices and other intangible exchanges, often incalculable in social, environmental, urban, cultural or ethical gains. Collaboration is a principle of nature that is also necessary for sustainability (MADEIRA, 2016, MESSIAS, 2017; REIS; URANI, 2011).

Cultural and creative industries

The term *cultural industries* was coined by the Frankfurt School (1930/40), with repeated criticism of the relationship between economy and culture. The expression got a new lease of life when the term creative industries was articulated in the 1990s, related to the phenomena of the knowledge economy and dematerialization of the economy (ARAÚJO, 2010; BENDASSOLLI; WOOD; KIRSCHBAUM, 2009; UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION, 2013).

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Activities originating in creativity, individual skills and talent, with the potential to create employment and wealth through generating and exploiting intellectual property and with managers and professionals from the technology area who make sellable products the economic value of which lies in their cultural (or intellectual) properties. "The idea of creative industries seeks to describe the conceptual and practical convergence of the creative ants (individual talent) with the cultural industries (mass scale), in the context of new media technologies and in the scope of a new knowledge economy, in view of its use by new consumers who are interactive citizens. "In my view, it makes more sense to limit the term 'creative industry' to an industry in which intellectual work predominates and where the result achieved is intellectual property

People use the term as a synonym of content industries, but what we increasingly see is a wide range of creativity-based processes, products and services, the origins [Creative industries] produce goods and services which use images, text and symbols as their medium. They are industries guided by a regime of intellectual property and [...] push the technological boundaries of new information technologies. Overall, it is agreed that there is a core group of creative industries, a heart, made up of of which lie in much more traditional things, such as craft, folklore or handicrafts, they are increasingly using management and information technologies to transform music, audiovisual, multimedia, software, broadcasting and editorial processes in general. However, curiously, the boundaries of what is a creative industry is not clear themselves into widely-distributed goods, products and services."

"The creative industries are formed based on the convergence between the media and information industries and the cultural and arts sector, becoming a significant and competitive) arena for development in knowledge-based societies]...] operating in significant contemporary dimensions of cultural production and consumption [...] the creative industry sector has a wide range of activities, the core of which, however, lies in creativity " Creative industry activities can be placed on a continuum going from those totally dependent upon the act of taking content to the audience (most live shows and exhibitions, including festivals) which tend to be labor-intensive and, in general, subsidized, to more commercially oriented informational activities based on reproducing original content and transmitting it to audience (generally distant) (publication, recorded music, film, broadcasting, new media)." Creative industries are understood as a set of specific economic sectors, selection of which is variable depending on the region or country, according to the potential economic impact on generating wealth, employment, tax revenue and exports."

"The concept of creative industries is used to represent a cluster of activities of which creativity is an essential component, directly included in the industrial process and subject to copyright protection. They are the "cycles of creation, production and distribution of goods and services using creativity and intellectual capital as the main nputs.

cultural, linked to artistic-cultural production (music, dance, theatre, opera, circus, painting, photography, cinema), including other expressions or activities related to the "The creative sectors are those in which the main process of the productive activities is a creative act generating a product, good or service of which the symbolic dimension determines its value, resulting in the production of cultural, economic and social wealth [...] those in which the main inputs of the productive activities are intellectual property is not an obligatory element nor the sole definer of the value of creative goods and services [...] going beyond the sectors typically referred to as [...] those in which economic value is generated basically as a function of exploiting intellectual property expressing a rather limited view, as new media, the content industry, to design, to architecture, among others.". creativity and knowledge,

which values art for art's sake, promotes intensive use of new information and communication technology, making extensive use of multifaceted equipment; the second block covers the products generated, such as infinite variety, vertical differential and staying power; and the third block represents a particular form of consumption, cultural in character, demand of which is largely unstable. "the characteristics of the creative industries can be grouped into three large blocks: the first block refers to a form of production of which creativity is the key resource,

*text in English

"the cycles of creation, production and distribution of goods and services which use creativity and intellectual capital as the main inputs. They include a set of knowledge-based activities which produce tangible goods and intangible intellectual or artistic services with creative content, economic value and market objectives" Cultural industries] make reference to forms of cultural production and consumption of which the symbolic is a significant element in the core [...] The term creative industries applies to a much broader productive set, including the goods and services which produce the cultural industries, such as those depending on innovation, including many types of software research and development.

DCMS (1998 and 2005*) and Howkins (2001)	X Unctad (2010)	Symbolic Texts model	Concentric Circles Model (2001)	OMPI Model (2003)	Unesco Statistics Institute Model	Americans for the Arts Model
1 Architecture	1 Creative services: architectural, advertising, cultural and recreative, creative research and development (R&D), other digital creative services		1 Architecture	1 Architecture	1 Architecture	1 Architecture
2 Advertising		1 Advertising	2 Advertising	2 Advertising	2 Advertising	2 Advertising
3 Design	2 Design: interior, graphic, fashion, jewelry, toys		3 Design	3 Design	3 Design	3 Design
4 Arts and antiques	3 Visual arts: painting, sculpture, photography and antiques	2 Creative arts	4 Visual Arts	4 Graphic and Visual Arts	4 Visual Arts, handicrafts,	4 Visual Arts
5 Artisan work	4 Traditional cultural expressions, handicrafts, festivals and celebrations				5 Festivals	
6 Fashion	5 Fashion expressed in item 2	3 Fashion	5 Fashion	5 Fashion 6 Clothing and Shoes		
7 Cinema and video		4 Cinema	6 Cinema	7 Cinema and Video	6 Cinema and video	5 Cinema
8 TV	6 Audiovisual: films, radio and other radio broadcast	5 TV and Radio	7 TV and Radio	8 TV and Radio	7 Audiovisual hardware 8 TV and Radio	6 TV and Radio
9 Editing and publishing	7 Print publishing and media: books, the press and other publishing	6 Publishing industry	8 Publishing industry	9 Publishing industry 10 Paper industry	9 Publishing industry 10. Printing equipment	7 Publishing industry
10 Scenic arts	8 Scenic arts, live music, theatre, dance, opera, circus, puppet shows etc.		9 Scenic Arts	11. Scenic Arts	11. Scenic Arts	8 Scenic Arts
11 Radio	9 Radio expressed in item 8	7 Radio in item 5	10 Radio in item 7	12. Radio expressed in item 8	12. Radio expressed in item 8	9 Radio in item 8
12 Leisure software	10 New media: architectural, advertising, cultural and recreative, creative research and development (R&D), other digital creative services	8 Videogames and computer games	11 Videogames and computer games	13 Music 14 Recording Studios 15 Musical instruments		
13 Music	11 Live music expressed item 8	9 Music	12 Music 13 Audio recording		 Musical instruments Sound equipment 	10 Music
14 Museums (2005) 15 Galleries (2005)	12 Cultural sites, archeological sites, museums, libraries, exhibitions etc.		14 Museums and libraries		10. Museums, galleries and libraries	11 Museums, zoos
16 Toys and games (Howkins, 2001)	13 Toys expressed item 2			16 Games		
17 Software (SW) (2005)	14 New media in item 10	11 Internet12 Electronic devices13 Software		17 Software 18 Electronic consumer goods	14 Software (SVV)	
18 Cultural traditions (2005)	15 Traditional cultural expressions expressed in item 4		15 Heritage services			
19 R&D (Howkins, 2001)	16 Creative R&D item 10					
	17 Photography expressed in item 4			19 Photography, photographic equipment	15. Photography (distinct from visual arts in item 4)	
				20. Collective management entities	16 Means of Communication	12 Art schools and workshops
JUST ONE MODEL:		13 Sport	16 Literature	21 Homeware		13. Zoos expressed in item 11
Chart 3 – Comparison h	Communicon hatwaan intarnational classifie	daccification modals for the creative industrias	astiva inductriae			

Chart 3 – Comparison between international classification models for the creative industries Source: Messias (2017, p. 196).

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The dematerialization of the economy is related to the cultural and creative industries in the literature in four ways: 1) the centrality of creativity, with a certain tendency to commoditize through generating intellectual property (IP) rights; 2) culture, the value of which, attributed to consumption, is more symbolic than material; 3) the *"convergence between art, business and technology"*, an assumption of the Frankfurt School still accepted by the cultural industry; and 4) the creative industries, which transform these meanings into economic value, through IP. Three other elements bring them closer to sustainability: a) predominance of immaterial inputs - creativity, culture, technology, knowledge and information; b) value in symbolic production, with *"extensive use of multipurpose teams"*; and c) consumption, the value of which is more symbolic than material (BENDASSOLLI; WOOD; KIRSCHBAUM, 2009).

Although the debate around what creative industries are and what sectors they comprise has not gone away (Charts 2 and 3), creative industries predominate as pioneers in the joint work of creativity and innovation, key elements of the economy.

Chart 4 brings together the 16 creative industries most cited in the international classifications (Chart 3), showing different associations with each other. Arts is that which most varies in scope. In general, it is associated with graphic or visual arts. None of the classifications considered tourism, although directly benefited by the performance of the other sectors and cited in the literature since Creative Nation (AUSTRALIA, 1994) and in the Creative Economy Secretariat Plan (BRASIL, 2011).

ARCHITECTURE	DESIGN
ADVERTISING	FASHION
PUBLISHING INDUSTRY	ARTISAN WORK (ARTS)
RADIO	CINEMA AND VIDEO
MUSICA (INCLUDING LIVE)	TV
SCENIC ARTS	ARTS (DIVERSE)
MUSEUMS AND GALLERIAS	SOFTWARE AND/OR NEW MEDIA
LEISURE SOFTWARE	ELECTRONIC GAMES

What essentially distinguishes the cultural from the creative industries (and the cultural economy from the CE) is the recognition of high-tech sectors, in addition to those of culture, as creative industries (Charts 3 and 4).

Creative clusters and hubs

The terms creative clusters and hubs refer to environments where cultural and creative industries concentrate - a building, a street or a neighborhood. Creative clusters differ from the industrial concept coined by Porter (1998) in that they are places of residence and work, where professionals from culture, creativity and technology (the creative class) live, work and pass through.

The first of these environments marks the new meanings that were transferred by the artistic class to old industrial and commercial districts in central urban areas,

Chart 4 – 16 most cited creative sectors Source: Messias (2017).

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in the first signs of fragility of the industrial economy (1980/90). Hubs are where the most sophisticated productions in the CE are developed, produced and/or marketed, usually specialized in a certain sector (LANDRY, 2011; REIS; URANI, 2011; UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION, 2013).

Creative cities

The term creative cities, per se, highlights the urban environment as the main locus of the CE, exactly where the greatest pollution is generated and almost all of the extracted natural resources are consumed. The term dialogues conceptually with those of smart city, healthy city and urban resilience, or selfsufficient city, where food, energy and zero waste are produced. In the creative city, the creative environment, green areas, cultural enjoyment and respect for differences are cultivated. They concentrate a large number of representatives of the creative class, who make it dynamic, interesting and increasingly sustainable. Cities that invest in tourism policies, the environment, sustainable urban planning, cultural heritage - material and immaterial -, creative education and promoting cultural heritage; where multiple connections and access to technology promote transactions, innovative businesses and participatory topdown and bottom-up governance models in the long term (LERNER, 2011; LETAIFA, 2015; MESSIAS, 2017).

The theme of creative cities has gained momentum and international visibility due to the successful experiences of cities that have identified creativity as a strategic factor for their development. In 2004, Unesco articulated the Creative Cities Network (Unesco Creative Cities Network - UCCN), the aim of which is to promote active cooperation between member cities and to bring creativity to the heart of their local development plans. Each UCCN member city falls into one of the seven categories that best expresses its creativity: 1) handicrafts and folk arts; 2) media arts; 3) cinema; 4) design; 5) gastronomy; 6) literature; and 7) music. In 2017, there were180 UCCN member cities, in 72 countries. There are eight UCCN member cities in Brazil: Curitiba and Brasília - design; Santos - cinema; Belém, Paraty and Florianópolis - gastronomy; João Pessoa - handicrafts and folk arts; and Salvador – music (UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION, 2017).

The effects of changes, disruptions and innovations through the use of creativity are more noticeable in cities, where human activities are denser. It is an opportunity, Brazilian creativity is renowned, in the country that most urbanized in Latin America in the 20th century, when the Brazilian population went from rural (28% in 1920) to urban (85% in 2010) (Table 1). The expectation

Table 1 – Evolution of the rural, urban and total population (in millions) -Brazil 1920-2010 Source: Messias (2017, p. 199). Demographic census – IBGE.

Year	Rural Po	pulation	Urban Po	pulation	Total
1920	23	82%	5	18%	28
1940	28	68%	13	32%	41
1950	33	63%	19	37%	52
1960	38	54%	32	46%	70
1970	41	44%	52	56%	93
1980	38	32%	81	68%	119
1990	35	24%	111	76%	148
2000	30	18%	140	82%	170
2010	28	15%	162	85%	192

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is that more than 90% of the Brazilian population will live in cities by 2030 (BRASIL, 2015).

Creative class

The term creative class was coined by Florida (2011), recognizing it as the main engine of the CE and the creative city, the human capital that makes them stand out. The creative class brings together professionals from different fields, from high technology, among the best paid in the market, to artisans and representatives of popular culture. It is prevalent in the literature that workers in this class are better paid than average, something questioned in recent publications, precisely because of the variation in earnings between sectors (BENDASSOLLI; BORGES-ANDRADE, 2011; FLORIDA, 2002; LANDRY, 2013; UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION, 2013).

They attribute to the creative class disruptive processes and modes of working and doing business; social, economic and environmental innovations; and the ability to migrate the human capital value of serial labor to the creative differential. Mostly young, under 40 years old, they are protagonists in public policies and solutions for a post-modern, predominantly urban and globalized society. They are also employed in traditional sectors of the economy, where they are responsible, to a large extent, for innovations in production and market strategies (BENDASSOLLI; BORGES-ANDRADE, 2011; OLIVEIRA; ARAUJO; SILVA, 2013).

In the United Kingdom, in particular, and in Argentina, highly qualified human resources characterize the creative class. Artopoulos (2012) highlights the training of human resources as an Argentine differential for the CE compared to other countries in Latin America. The United Kingdom has adopted the term creative intensities, for industries or activities with a large number of creative jobs, the creative occupations. The number of creative professionals is perceived in the United Kingdom as a comparative advantage, for which there is vast literature aimed at attracting qualified foreign investment and human resources (ARTOPOULOS, 2012; UK TRADE & INVESTMENT, 2014; NESTA, 2013).

In Brazil, there are different ways of characterizing the creative class: length of training, compensation, positions, main or secondary occupation, number of hours dedicated to creative work, exclusive or partial dedication, among others. Corroborating the international literature, workers in the Brazilian creative class have spent a longer time in formal studying and, on average, are better paid. What most distinguishes them from other professional classes in Brazil is that they tend to have greater personal involvement and satisfaction and spend less time tied to the same job (BENDASSOLLI; BORGES-ANDRADE, 2011; OLIVEIRA; ARAUJO; SILVA, 2013).

Creative education and cultural formation

The terms creative education and cultural formation, inseparable from the cultural dimension, mark the growing recognition by the market of the economic value of culture, technology and knowledge and creativity assets for the 21st century professional. Creative talents and interpersonal skills are part of the changes that challenge the educational model influenced by Fordism (1914). In developing countries, despite cultural wealth and creative potential, colonial heritage still largely perpetuates precarious models of serial education in the industrial era (BRITISH COUNCIL, 2016; HARVEY, 1993; MESSIAS, 2017; REIS; URANI, 2011).

THE CREATIVE ECONOMY IN THE REALM OF SUSTAINABILITY

The objective here is to contribute to the debate of the CE in the context of sustainabiliy, a not very explicit association that has been found since the first writing on it. However, an interrelation is uncovered based on analysis of possible dialogues between the terms used to define CE and eight dimensions of sustainability, considered here: economic, social, cultural, environmental, territorial, technological, political-institutional and ethical.

The economic dimension of sustainability is based on the production of intangibles and the consumption of symbolic value, anchored in the assets of creativity, culture and technology that were inherited by the CE from the new economies at the turn of the 21st century (REIS; URANI, 2011). The dematerialization of the economy identifies the cultural and creative sectors in this dimension of sustainability, as does high potential for capital turnover and jobs in their production chains.

The preponderance of technology as a vector for expansion and a central asset in the definitions of CE and in the classifications of the creative industries (Charts 1 to 4) marks the technological dimension of sustainability. In the 21st century, especially in the urban environment, technological platforms have served to boost cultural and creative sectors in new ways of accessing and operating in the market. It can be seen (Charts 3 and 4) that the recognition of high technology sectors as creative industries is what mainly differentiates the CE from the culture economy, and creative industries from cultural ones (MESSIAS, 2017).

In the genesis of the CE we find the cultural dimension that, within the scope of the United Nations, entered the realm of sustainability starting from Barcelona, in 2004¹, and was definitively incorporated into the UN documents following Rio+20 (2012) (UN, 2013; UCLG, 2011).

The final document of the United Nations Conference on Sustainable Development (R(o+20), [...] "The future we want", and the 2013 ECOSOC Annual Ministerial Review, thus recognizing the importance of culture and cultural diversity for sustainable development [...]. The contribution of culture [...] translates into inclusive social and economic development, as well as sustainability of the environment, peace and security. [...] The potential of

²Culture as a dimension of sustainability on the United Nations (UN) agenda comes from the United Cities and Local Governments Unit of Unesco (UCLG), in an event creating Agenda 21 for Culture in Barcelona, in 2004. Culture : fourth pillar of sustainable development (UNITED CITIES AND LOCAL GOVERNMENTS, 2011) is based on the understanding that the social, environmental and economic dimensions alone do not reflect the complex relationships and demands of post-industrial society and recognizes creativity, knowledge, diversity and beauty as irrefutable bases in the dialogue for peace and progress, and values intrinsic to freedom and human development (MESSIAS, 2017).

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culture as an engine of development has been demonstrated [...], proving that there is a valuable, strong and considerable productive sector, formed by cultural and creative activities and resources. (UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION, 2013, p. 10).

Culture as a dimension of sustainability impacts both consumption choices (usufruct rather than property) and cultural specificities of each location (NASCIMENTO, 2012). It is directly related to the social and ethical dimensions, which call for a new culture, precisely in changes in the consumption pattern and in the new work, social, economic and ethical relations with the environment, ours and that of other species.

In terms of *creative education and cultural formation*, the CE's relationship with the *cultural dimension* of sustainability is evident, as well as the inextricably linked terms of *culture economy and cultural and creative industries*. Duxbury and Jeannotte (2011) associate, with urban and local development, four central concepts present in the relationship between culture and sustainability: 1) culture as capital; 2) culture as a process and way of life, which interacts with the environment; 3) culture as a central element in the connection of values underlying sustainability (or unsustainability); and 4) culture as a creative expression, which provides insights into environmental and sustainability concerns. They also list a fifth perspective, which interrelates the other four: the conceptual expression of the interdependent cultural relations of networks for adapting to complex changes in the human environment and human ecology (DUXBURY; JEANNOTTE, 2011, p. 3).

Culture also [...] equips people with the skills to take ownership of their own development processes. When a focus on people and places is integrated into development programs and peace-building initiatives [...] taking into account the cultural context, including diverse values, conditions, resources, capacities and local limitations, there can be lasting and transformative change. (UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION, 2013, p. 9).

The *social dimension* of sustainability in the CE is revealed in its association with the multiprofessional class, from the term *creative class*, and in the changes in the working relationships of the new economies. It refers to a combination of protagonists, individual and collective, innovating in business and new jobs and shifting the traditional paradigms of hierarchy and serial production of the industrial era.

The urban environment is evident in the term *creative cities* as the *environmental dimension* of the CE. In such cities, one finds, among others, the creative class, new economies with an intangible base, reformulations on formal education and manifestations of culture.

The terms creative clusters and hubs are related, here, to the *territorial dimension*, characterized by the reconfiguration of old structures or new urban configurations and buildings caused by social actors. New meanings are transferred to these spaces by the creative class and impact the aspect of the landscape, the relationship of the population with the environment, the economy and the politics of the cities (SANTOS, 2011, p. 15).

[...] understanding, on the one hand, the transformations that are taking place, the impact of these transformations on the space that it is up to us to study, but also how transformations made in the space will contribute so that a given policy can be possible, so that a given economy can be possible, for a given society to be possible, for a given culture to be possible, for a given morality to be possible.

Inseparable from sustainability, the ethical dimension is presupposed in the interrelationship between the others, as observed in the social, economic and productive relations in the new economies. Case studies in the literature include the entry of Australian Aboriginal production into the modern art market, in the late 1990s, and the classifications of the creative industries (Chart 3). The Australian Indigenous Art Commercial Code of Conduct (Australia Council, 2010) is the result of the understanding that the benefits obtained from commercialization should be shared with the original peoples (MADEIRA, 2014). Among the creative industries, only the classification of Americans for the Arts includes zoos (CREATIVE INDUSTRIES, 2017; UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION, 2013, p. 22), human entertainment that requires keeping animals in captivity, a conflict of ethics in the sustainability arena.

In the political-institutional dimension, finally, the imperatives of originality and creativity in the CE, which are nourished by the sources of culture and expand with technology, underline the challenge of multisectoral policies. Present since Creative Nation (AUSTRALIA, 1994), multisectoral political action and the centrality of participatory governance guide CE policies. Creative Australia (2013), the new Australian cultural policy, further expands the perception of its predecessor, articulating the sectoral breakdown of performance in governmental instances, at different levels.

CONCLUSION

The CE paradigm evolved towards sustainability from the 1980s onwards, when discussions on sustainable development, under the leadership of the UN, coincided with local changes, the effect of urban occupation by the creative class of central industrial areas.

The association of the CE with sustainability, in an incipient way, can found from the first writing. The analysis of terms used in the literature to define CE (creative class, creative city, creative education, culture, economy(ies) and cultural and creative industries) take on another meaning when related to the dimensions of sustainability. It can be seen that, directly or indirectly, the eight dimensions of sustainability considered here (economic, environmental, social, cultural, technological, territorial, ethical and political-institutional) were already notable in the origins of the CE, in the Creative Nation: commonwealth cultural policy.

Analysis of the interrelationship between these dimensions of sustainability and those terms used to define CE allows some conclusions to be drawn. First, that the CE paradigm is characterized as a new, essentially urban, economy, pós- |⊥ ∽ evidenced in the term creative city. It stands out as an economical alternative booming in cities, a space where the challenge of sustainability grows as the population becomes urban. The notion of an urban economy reinforces the entry of culture into the arena of sustainability at the UN level, as demanded by local governments, and the creation of the Unesco Creative Cities Network in 2004.

Second, from the group of 16 sectors most cited in international classifications (Chart 4), it appears from the perspective of sustainability that the recognition of high-tech sectors as creative industries is the main conceptual difference between CE and the culture economy.

Third, due to the relationship between the dematerialization of the economy and the emphasis on production of intangibles and consumption of symbolic value. The equation of production and consumption in the CE is not limited to the availability of natural resources.

Fourth, that the new directions outlined for the 21st century professional include creativity as a differential, already underlined as a comparative advantage by countries that invest in attracting the creative class. Creativity is a humanized niche in the market that, at least for now, cannot be replaced by technology.

Finally, we can conclude that the CE, as well as sustainability, is a consequence of the proclaimed paradigm shift in modern development models. Analysis of the close relationship between the terms of the CE and the dimensions of sustainability supports the notion that the creative paradigm was motivated by discussions in the sustainability arena.

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