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The contextual turn in career studies: a research agenda based on the interconnections between the cities, labor market, and professional paths

MARCIA CRISTIANE VACLAVIK
UNIVERSIDADE DE CAXIAS DO SUL (UCS)

JANAINA MACKE
UNIVERSIDADE DE CAXIAS DO SUL (UCS)

SIDINEI ROCHA-DE-OLIVEIRA
UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL (UFRGS)

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1. Introduction

The global context of accelerated transformation forces society to organize itself in different ways to promote its development. In the so-called innovation ecosystems, networks of multiple actors combine elements of social, political, economic, and cultural nature, creating an environment capable of supporting the development and growth of enterprises based on knowledge and innovation (Spigel, 2015). With programs aimed at finding solutions to issues that challenge cities, efforts and resources are committed to promoting actions that can positively impact citizens, foster economic growth, and improve the quality of life (Curşeu et al., 2020; Macke, Casagrande, et al., 2018; Mulas et al., 2015; Pasmore et al., 2019).

In these ecosystems, high levels of human capital are a vital element for competitiveness (Spigel, 2015). Moreover, human capital is considered a decisive factor for innovative processes and development (Edquist, 2001; Stam, 2015). In the domain of knowledge translated into practical know-how, innovation directly relates to individuals. Therefore, the relationship between innovation and human capital is discussed by several authors through different and multiple analytical lenses (Mariz-Pérez et al., 2012; Mcguirk et al., 2014; Munjal & Kundu, 2017). It is essential, then, bringing the discussion about innovation ecosystems closer to the realm of individuals. In this sense, the importance of the work – "the core of the social structure" (Castells, 2010, p. 265) - is reiterated. However, although work occupies a central place in people's lives, it is often neglected in the scope of academic and practical discussions involving innovative processes linked to the development of ecosystems and urban centers. Instead, work is often seen as a mere organic consequence of society's other efforts.

Thus, even though innovation ecosystems are potentially creators and transformers of labor markets, discussions on the relationship between these and labor itself continue in an underexplored space. In addition to macro indicators that reflect a country's productivity and wealth, one of the concrete manifestations that work assume is translated, at a micro-level, into individual professional trajectories – that is, their careers. Individuals operate their careers in a "limited social space" (Gunz & Mayrhofer, 2015, p. 4). In fact, the ways in which people conduct their trajectories are marked and shaped by individual differences but also by micro and macro contexts (Briscoe et al., 2018; Mayrhofer et al., 2007). Especially in countries that are not part of the WEIRD group (an acronym for western, educated, industrialized, rich, and democratic) (Briscoe et al., 2018, p. 119), the context can be seen as a detrimental factor to career development.

Remarkably, the local peculiarities that govern labor relations influence the individual's agency in their career trajectories (Vaclavik, Rocha de Oliveira & Oltramari, 2021). Thus, the high degrees of persistent adversity (Shepherd & Williams, 2020) force the labor markets and workers to operate in unfavorable conditions. In Brazil, these conditions appeared in general indicators that reflect the low level of education of the population, low productivity rates of the workforce and organizations (Nogueira & Zucoloto, 2017), and the constant high unemployment rates in recent years. Then, under unfavorable situations, context can act as a negative limiting factor for career advancement, directly impacting the creation and flow of knowledge. Thus, a non-virtuous cycle is created, which negatively contributes to developing individual trajectories and the circulation of practical knowledge - and, more broadly, impacts the promotion of development and improved quality of life at a local, regional, and national levels.

We argue that innovation ecosystems, in the circumscription of the cities in which they operate, are spaces that foster various capitals, including human capital. As a result, they can

enhance work and careers by acting directly in the (re)configuration of labor markets. By understanding cities and their various actors as potential positive agents, work can be placed at the center of development discussions - a vital concept to innovation ecosystems. Therefore, this study **aims to analyze how international literature articulates the concepts of careers and cities from the perspectives of ecosystems, innovation, and sustainable development**. A systematic literature review using the Web of Science database was used to identify, through scientific investigation, possible topics of interest for the discussion we present in this study.

By aligning the discussion of the interrelationship between careers in the context of the cities, including their interrelation with innovation ecosystems and sustainable development, this study brings contributions to areas that have shown little academic approach. The study of cities as a context in which careers develop has received little attention from scholars, highlighting an important research gap based on the understanding of the city as a "new analytical level" (Kozhevnikov, 2021, p. 5). In practical terms, a better understanding of these instances can help to promote people's employability and the competitiveness of regions and countries. After all, considering that cities provide the context in which knowledge circulates, careers develop, and innovations take place, "knowledge about careers in cities contributes to individuals, organizations and the formulation of urban policies, including economic and social" (Tams et al., 2021, p. 14). Furthermore, good city structures can create, maintain and promote networks, impacting job creation, reducing poverty, and increasing prosperity.

This study is structured as follows: the following chapter presents the theoretical outline of the study. In chapter three, the methodological procedures used and applied in the study are described. Chapter four presents the analysis of the results, with the mapping of four main categories that support the discussion promoted in chapter five. Then, the proposition of a conceptual model is developed. Finally, chapter six concludes the study with final considerations, contributions, limitations, and suggestions for future studies.

2. Establishing the relationship between careers, cities knowledge, and ecosystems

Careers can be analyzed and understood through different theoretical lenses in different fields of knowledge. An umbrella concept is what considers careers as "the evolving sequence of a person's work experiences over time" (Arthur et al., 1989, p. 8). Over the last few decades, especially from the second half of the 1970s, significant changes in labor organization affected not only the dynamics of the labor market but also how workers build, transform and maintain their careers (Baruch & Vardi, 2016; Briscoe et al., 2006; Hall, 1976, 1996). Changes in the macro level, characterized in a more unstable, turbulent, and much less predictable context, were thus accompanied by theoretical currents in career studies. In direct opposition to the notion of "traditional career" (that is, linear, stable, and predictable), a new perspective has emerged in which it is the individual, not the organization, who takes responsibility for the success of the worker's professional trajectory. This movement was accompanied by a diversity of conceptual contributions, such as the boundaryless career, the protean career, the post-corporate career, the multidirectional career, or the intelligent career, to cite just a few (Baruch & Vardi, 2016).

However, it is known that the space where individuals experience their careers is shaped and formed by multiple issues, which manifest themselves at different levels (Mayrhofer et al., 2007). Also, it is influenced by different actors (Guimarães, 2008; King et al., 2005) and presents itself in different ways to different groups of workers (Baruch, 2015; Baruch & Vardi, 2016; De Vos et al., 2020). Considering that this movement occurs in a temporal and locally situated context, the relationship between cities and careers is experienced by individuals in multiple and multidimensional aspects (Tams et al., 2021).

Careers can then be understood from the notion of ecosystems (Baruch, 2015), in which there is a systemic and dynamic interaction between actors and contexts (De Vos et al., 2020). From this perspective, careers are also seen through sustainability – a specific form of human sustainability, in the domain of the labor sphere. This view considers the interconnectivity, interrelationship, influence, and interaction between different actors in the short and long term (Müller & Scheffer, 2020). The concept of a sustainable career is thus linked to the time dimension. It is characterized "by the development, conservation and renewal of resources related to the career of the individual who works, including human and social capital (...) as well as personal characteristics " (De Vos & Van der Heijden, 2015, p. 11). However, despite several studies considering the role of human resource management in the sustainability debate (Macke & Genari, 2019), and although innovation ecosystems are potentially creators and transformers of labor markets, the discussions of their relationship with work itself remain unexplored.

Broadening the understanding of career trajectories is essential to better comprehend innovation processes due to how knowledge circulates in the labor markets (Vinodrai, 2006). It is known that the city's human capital influences innovative processes, generating and attracting economic and social resources (Florida, 2002). In terms of the context in which human capital develops, the space of the cities is a complex ecosystem that goes beyond geographic proximity. Alone, this ecosystem is not capable of improving interaction and innovation (Boschma, 2005). On the other hand, the co-presence of many people, mostly strangers, forms a space on multiple levels. The circulation of knowledge then enhances identity formation and opens up new ideas (Florida, 2002; Tams et al., 2021), being promising sources of innovation and new paradigms of life in society (Florida, 2003; Pratt, 2008).

In this sense, recognizing that innovation occurs through the generation and circulation of knowledge (Carayannis et al., 2012), there is a need to combine geographical closeness and cognitive, institutional, organizational, and social proximity (Boschma, 2005). When combined, these dimensions allow knowledge to flow between agents. Cities considered pleasant to live in and with opportunities for cultural consumption attract people with different skills and talents, amplifying the potential to contribute to the labor market, innovation, local prosperity in economic and social spheres (Florida, 2002; Montanari et al., 2020; Tams et al., 2021).

3. Methodological procedures

Several authors have already discussed the importance of systematic review studies that use the existing research base to deepen the understanding of a particular topic, thus contributing to the advancement of knowledge (Adams et al., 2017; Petticrew & Roberts, 2006b; Tranfield et al., 2003; Webster & Watson, 2002). Thus, to achieve the objective of this study, we chose to carry out a systematic review of the literature using the Web of Science (WoS) database. This choice is justified since WoS is recognized as one of the most important scientific bases in the world (Petticrew & Roberts, 2006a). This process was divided into three phases.

In phase 1, throughout December/2020, searches were performed based on the methodological assumption of the PRISMA statement (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) suggested by Urrútia & Bonfill (2010). We used the abstract field as the key search field and realized eight independent searches. The search was performed with the terms: "career" and "city" or "cities" and their intersections with the terms "sustainab*" (for sustainability and related), "innovat*" (for innovation and related), "livab*" (for livability and related), "smart" (for smart cities and related"), talent* (for talent and related), "human capital", "employability" and "attractiveness ". The asterisk symbol (*) is

commonly used to search for related terms from the same root of the word. No temporal limitation was determined.

We define then the following criteria: i) to only include published articles, disregarding other types of documents; ii) to exclude articles in a language other than English and/or articles unavailable; iii) to exclude articles that did not address or problematize, in a central way, the discussion of careers in the context of cities; iv) to exclude articles that used the term "city" only in reference to the research location, which is, not related to the object of this investigation. The refined search resulted in a corpus of 46 scientific articles. Figure 1 illustrates the process steps.

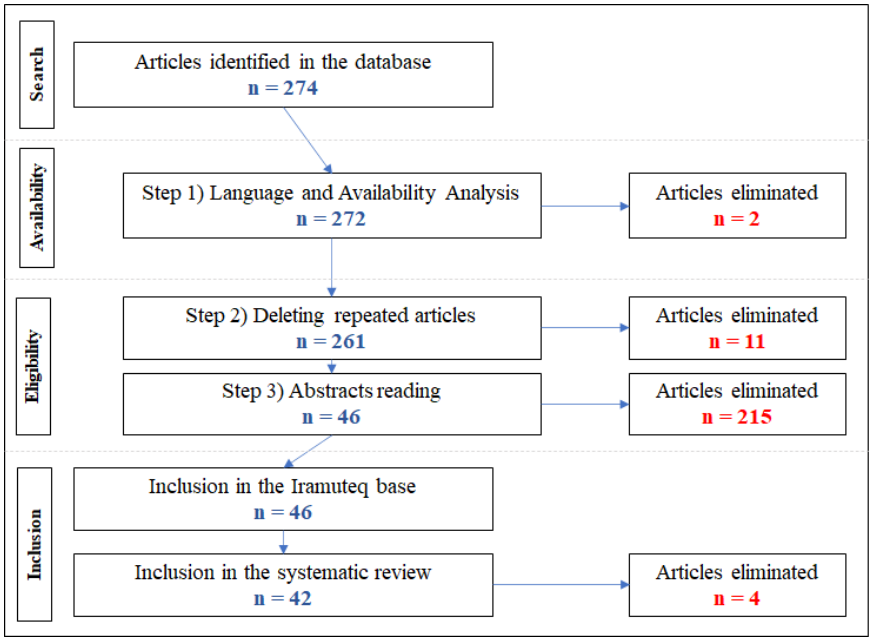


Figure 1. Diagram of the search and selection process - phase 1.
Source: elaborated by the authors, based on the PRISMA declaration assumptions.

In the second phase, the abstracts of the 46 selected studies were organized in a specific file to enable the use of the Iramuteq software (*R Interface pour les Multidimensional Analyzes of Textes et de Questionnaires*, version 0.7 alpha 2). Iramuteq is a content analysis tool and rigorous statistical processing of textual data. This software is used for semantic contextual analysis, extracting and quantifying the most significant structures (called elementary context units – ECUs) (Illia et al., 2014). Iramuteq performs different types of data analysis, from simpler processes (such as lexicography) to multivariate analysis (such as descending hierarchical classification and similarity analysis) (Camargo & Justo, 2013). In this process, the corpus is divided into blocks, and the software uses chi-square tests to verify the association of context units into classes (Vallbé et al., 2005). These techniques facilitate and control interpretive biases, guiding researchers in their analytical processes (Macke, Sarate, et al., 2018). In the end, the main clusters that encompass the different approaches to the topic under study are the result. After analyzing the results of this phase, four articles that did not fit into any category were excluded.

In the third phase, the 42 articles in the database were qualitatively analyzed based on the results found in step two. The qualitative analysis allowed us to identify the central elements, trends, and research gaps related to the discussion of careers in urban centers, including the perspectives of innovation and sustainability. The 42 scientific articles were published between 2000 and 2020 (figure 2), with an expressive growth observed from 2018. The next session presents and discusses the results found.

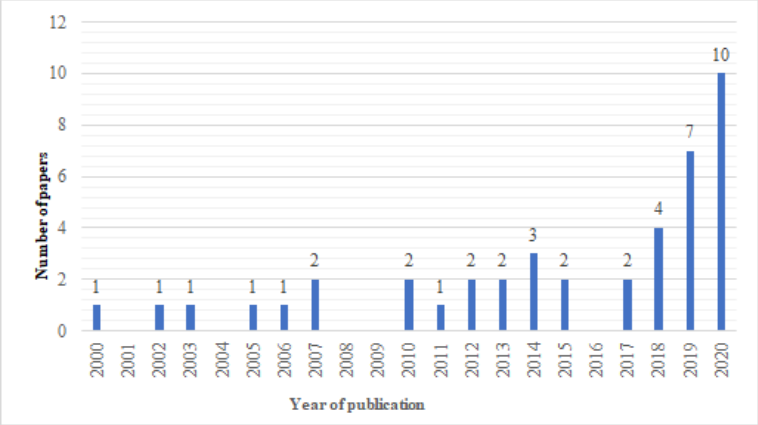
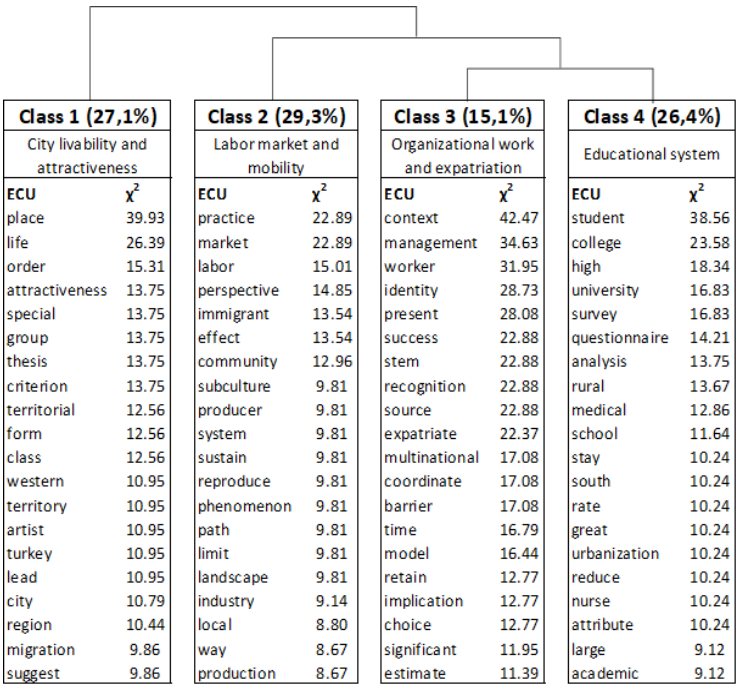


Figure 2. Number of articles in the final database per year of publication.
Source: elaborated by the authors, based on the search's results.

3. Results

The results found after using Iramuteq pointed to four main classes, which make up 82.12% of the ECUs in the corpus and allow different views to interpret the phenomenon under study. First, the software calculates the chi-square values ($\chi 2$) associated with each word. Then, it was possible to create a dendrogram (distance tree) representing the semantic relevance within the class and helps to analyze the distribution of the different concepts (figure 3).



Class 1 (27,1%)		Class 2 (29,3%)		Class 3 (15,1%)		Class 4 (26,4%)	
City livability and attractiveness		Labor market and mobility		Organizational work and expatriation		Educational system	
ECU	χ^2	ECU	χ^2	ECU	χ^2	ECU	χ^2
place	39.93	practice	22.89	context	42.47	student	38.56
life	26.39	market	22.89	management	34.63	college	23.58
order	15.31	labor	15.01	worker	31.95	high	18.34
attractiveness	13.75	perspective	14.85	identity	28.73	university	16.83
special	13.75	immigrant	13.54	present	28.08	survey	16.83
group	13.75	effect	13.54	success	22.88	questionnaire	14.21
thesis	13.75	community	12.96	stem	22.88	analysis	13.75
criterion	13.75	subculture	9.81	recognition	22.88	rural	13.67
territorial	12.56	producer	9.81	source	22.88	medical	12.86
form	12.56	system	9.81	expatriate	22.37	school	11.64
class	12.56	sustain	9.81	multinational	17.08	stay	10.24
western	10.95	reproduce	9.81	coordinate	17.08	south	10.24
territory	10.95	phenomenon	9.81	barrier	17.08	rate	10.24
artist	10.95	path	9.81	time	16.79	great	10.24
turkey	10.95	limit	9.81	model	16.44	urbanization	10.24
lead	10.95	landscape	9.81	retain	12.77	reduce	10.24
city	10.79	industry	9.14	implication	12.77	nurse	10.24
region	10.44	local	8.80	choice	12.77	attribute	10.24
migration	9.86	way	8.67	significant	11.95	large	9.12
suggest	9.86	production	8.67	estimate	11.39	academic	9.12

Figure 3. Systematic review dendrogram.
Source: generated by authors based on Iramuteq data.

The papers are very dispersed concerning the journals of publication (table 1). We found five papers in "Human Relations", two papers in "Environment and Planning A: Economy and Space", two papers in "Geoforum", and two papers in "Urban Studies". The others have only one occurrence in each journal, that is, 31 papers published in 31 journals within different Science areas. Among the 42 articles that make up the basis of the systematic review, there is a

predominance of empirical research (37 studies, or 88%), among which 54.1% (20/37) used quantitative methodologies and 45.9% (17/37) had a qualitative focus.

Table 1. Publications by journal (our elaboration)

Source Title	Papers	Source Title	Papers
Human Relations	5	Journal of Cleaner Production	1
Environment and Planning A: Economy and Space	2	Journal of Coastal Research	1
Geoforum	2	Journal of Economic Geography	1
Urban Studies	2	Journal of Ethnic and Migration Studies	1
Advanced Education	1	Journal of Financial and Quantitative Analysis	1
American Journal of Tropical Medicine and Hygiene	1	Journal of Science Education and Technology	1
Australian Geographer	1	Journal of The American Planning Association	1
Australian Planner	1	Obrazovanie I Nauka-Education and Science	1
Bmc Health Services Research	1	Policy Studies Journal	1
China-An International Journal	1	Population Space and Place	1
Cities	1	Public Administration Review	1
Economic Geography	1	Quarterly Journal of Economics	1
Ethnography	1	Review of Economic Studies	1
Gifted Child Quarterly	1	Sage Open	1
Heliyon	1	South African Journal of Economic and Management Science	1
H-Ermes-Journal of Communication	1	Sustainability	1
Human Organization	1	Urban Geography	1
International Journal of Human Resource Management	1	Wmcaus Symposium	1
Italian Journal of Planning Practice	1	Women's Studies International Forum	1
Journal of China Tourism Research	1	**Total**	**46**

The four categories represent different approaches to discussing careers and cities (figure 4). While categories 1 (City livability and attractiveness) and 2 (Labor market and mobility) show little overlap with the others, categories 3 (Organizational work and expatriation) and 4 (Educational system) are more interrelated between them.

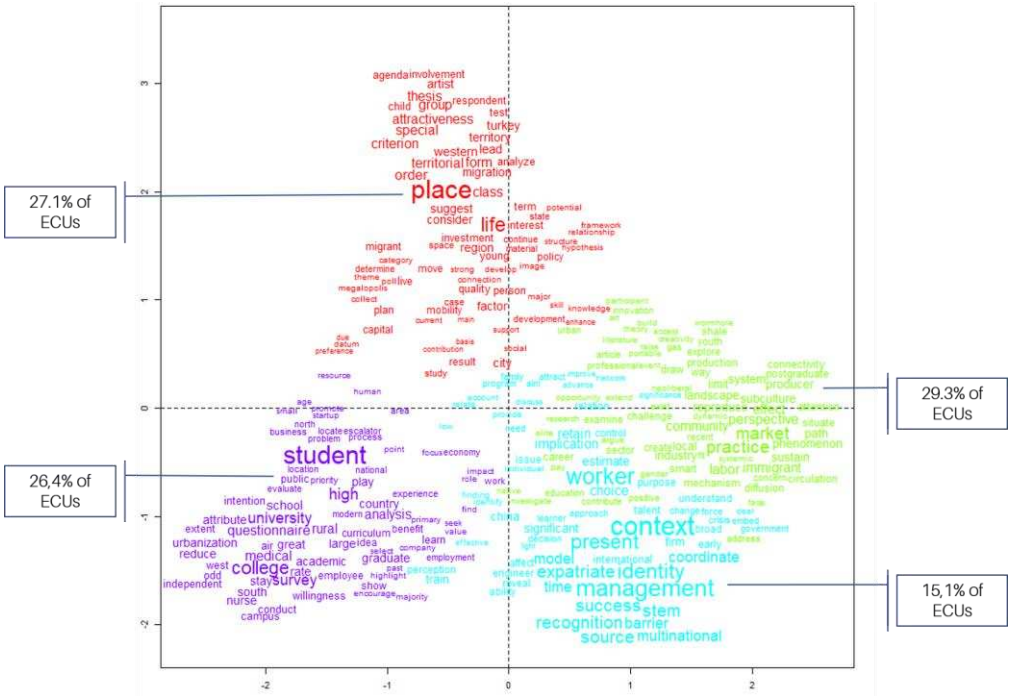


Figure 4. Main categories found in the systematic review.
Source: generated by Iramuteq based on the article's data.

The first category encompasses 27.1% of ECUs and grouped studies on territorial aspects involving the concepts of livability, quality of life, and the attractiveness of cities. In this category, the creative class discussions stand out, mainly because it has been seen as fundamental in the current changing, unstable and competitive scenario that characterizes the

knowledge-based society. In this perspective, research that can support the actors of such ecosystems in directing policies aimed at planning urban life, in a broad sense, gains even more importance. This understanding involves subjective perspectives, such as the idea of a "comfortable" city in which to live, and objective and instrumental aspects, related to professional life development, career construction, and material well-being.

The second category (29.3% of the ECUs) discusses local attractiveness closer to the labor market. This category includes the need to understand migratory movements and the territorial mobility of workers between centers and their impacts on communities and cities. The discussion that arises from this idea is interesting at least in two different ways: one, for global cities with a high density of capital and international networks, working as magnets of professionals seeking to develop their careers; and two, for the less developed cities, which can suffer from the effects of so-called brain drain.

The third category (15.1% of ECUs) relates the organizational and work context, including the need to understand the gaps between the structure of the labor market and the capacity to absorb human resources. Studies highlight the potential of perceiving careers as a possibility for collective development beyond the individual perspective. Some studies involve expatriation and the barriers to building the career and identity of workers in unknown territories. The authors also refer to the importance of these discussions from the perspective of smart cities and careers that involve highly intellectualized work - although they stress the relevance of secondary cities and blue-collar jobs.

The fourth and last category (26.4% of ECUs) involves the relationship between careers, cities, schools, and universities, particularly the role of different social actors in constructing local, regional and national development from an educational perspective. Studies point out the importance of the educational system for developing human capital in the context of accelerated technological advances. This assumption is based on the understanding that potential talent development in some strategic regions is also of interest to public policies. They also highlight the role of students, seen as essential agents of territorial development, the attentive look to the younger generations, and the dynamic movements of attraction and retention of people in the flow of mobility between cities.

In the next section, we discuss these four categories based on what has been debated and articulated in international literature.

4 Discussion

The four categories represent important pillars for academic discussion of careers in context, especially considering the circumscription of cities in connection with human, economic, and social development instances. The interdisciplinary approach allows us to explore themes at the frontier of knowledge in different research areas. The interconnectedness and interdependence between the studies reveal the potential of the analysis. In this sense, career capital must be analyzed beyond the individual perspective and understood as a "collective property" (Kozhevnikov, 2021, p. 5) since it involves contextual aspects that impact the construction of trajectories. There is an essential institutional role (Guo & Baruch, 2021), drawn in a complex network involving different actors and affecting the design of careers, the labor market, and life in general (Vinodrai, 2006).

Therefore, by reaffirming: 1) the relevance of human capital, work, and careers for the socio-economic development and general well-being of society; 2) the importance and strength of context in individual trajectories; and 3) the potential of innovation ecosystems for development in social, political, economic and cultural aspects; we reinforce that these instances cannot be understood separately and distinctly. As pointed out by Erdin & Ozkaya (2020) concerning public policies, the sustainable development of cities necessarily involves

addressing solutions to their economic and social problems. In this sense, it is crucial to understand that the discussion about human capital must be seen at the individual and organizational levels without disregarding its connection with broader spaces, which involve local, national and global contexts (Guo & Baruch, 2021; Mayrhofer et al. al., 2007).

Through the perspective of the cities' attractiveness in interaction with labor and development processes, one can see their connection with constructing an image of the future. It is linked to the strategic and sustainable construction of spaces that can meet human needs in the long term (Antonova et al., 2019; Curşeu et al., 2020; Erdin & Ozkaya, 2020). Thus, cities can be understood from their "territorial capital" (Antonova et al., 2019, p. 2) as spaces capable of promoting quality of life, serving as a reference as a good place to work and live (Alacovska et al., 2020; Tams et al., 2021). On the citizens' side, this perception involves a trade-off between objective and subjective combinations – such as cost of living, material and technological infrastructure, career-building possibilities, and well-being (Alacovska et al., 2020; Kozhevnikov, 2021).

In this sense, especially considering the idea of sustainable development in the long term, gains strength the notion that individual efforts for career development are not disconnected from collective efforts (Curşeu et al., 2020). This includes a look at the attractiveness of investments and the development of the labor market in cities (such as the offer of good jobs and possibilities for professional development), but also at the activities, interactions, and experiences of everyday life, which include aspects cultural, community, educational, political and religious, among others (Tams et al., 2021). Thus, the concepts of career sustainability (Ans De Vos & Van der Heijden, 2015) and the sustainability of cities themselves are linked.

The forces of attraction of cities impact regional economic development, growth, and innovation. The focus on the workers of the creative class then grows in relevance (Florida, 2003). It is noteworthy that this group of workers is very heterogeneous and goes beyond the artistic and cultural class limits. It also involves the intense use of knowledge. This is the case, for example, of the workers, focused on innovation and technological development, the so-called knowledge workers (Sánchez -Moral et al., 2018), who act as agents of innovation (Vinodrai, 2006). Attracting people from the creative class is a demand of post-industrial society. Therefore, this is an issue to be addressed by the government in urban planning, as there is a dispute between cities for these human resources (Antonova et al., 2019). Currently, it is not possible to understand and address the dynamics of the labor market and professional trajectories without considering the perspective of knowledge circulation (Vinodrai, 2006).

The discussion between the relationship between cities and the creative class involves understanding the mobility of these workers. It refers to the flow of human capital - that is, a continuous movement of ideas and knowledge in a combination of individual factors (which refer to people's decisions in their heterogeneity) and macro-contextual factors (Sánchez-Moral et al., 2018). Thus, it is possible to affirm that cities exert influence on careers, including the migratory flows of highly skilled people (Kozhevnikov, 2021). Understanding the creative class workers' career trajectories and their mobility drivers is essential to analyze innovative processes, depending on how knowledge circulates in the labor markets (Vinodrai, 2006). In this sense, there must be a close look at the workers' flow to avoid the "brain drain" and attract and retain foreign talent (Kozhevnikov, 2021). Incentives for people's mobility are related to several factors (Kronenberg & Carree, 2012) and are multi-faceted (Baruch, 2015). However, the labor issue remains vital in determining migratory movements concerning the construction and improvement of careers. The workers' mobility, however, should not be seen as a negative question since the "brain circulation" can bring positive outcomes at the individual, organizational and national levels (Baruch, 1995; 2015).

After all, from an individual perspective, work is not just a source of income but a means of personal development. Thus, individuals assess and consider whether the investment in skills development offers some return in the labor market (Kozhevnikov, 2021). This finding reinforces the challenges faced, for example, by smart cities, since it is necessary to continuously offer a labor market capable of accommodating different interests in terms of work opportunities, performance networks, and development (Curşeu et al., 2020). Here, the importance of synergy between the actors in the ecosystem can be seen since territorial attractiveness involves not only cities and their individuals but the organizations that are part of it. Furthermore, the perception of the non-monetary benefits of the general environment is reflected in people management policies. It includes remuneration as a way to compensate for the worse quality of life indices, especially in very competitive sectors and in high-ranking positions in companies (Deng & Gao, 2013) – the war for talent, referred to by Faulconbridge et al. (2009).

The importance of synergy between actors can be highlighted by the need for coordination and co-creation between different instances and/or barriers. It can involve: the society, in a broad sense (for example, considering cultural aspects involving the image and the (de)valuation of certain professions); the government (as a stimulus agent based on the development of incentive policies and measures); the local industry (in the specificity of each segment, referring to managerial decisions that design and affect the labor market, such as hiring for low salaries and other decisions that involve human resources); and the educational context (capable of training human resources in line with the demands and needs of the labor market), among other aspects (Ma et al., 2020). When there is an incompatibility between these instances, there can be evasion and loss of professionals, organizations, and investments, profoundly damaging the development cycle - for example, when the educational context forms the workforce without considering the labor market needs (Bennett, 2010). Particularly noteworthy is the interrelationship between universities and the labor market and the potential for collaboration between academia and local industry (Thirunavukarasu et al., 2020).

The interrelationship between the university and the labor market is linked to a future vision that necessarily requires looking at the younger generations (Voronina, 2015). Therefore, it is worth highlighting the importance of the educational system in forming human capital that can respond to rapid technological advances in times of globalization (Thirunavukarasu et al., 2020). Thus, a strategic look is needed. It must consider the planning and design of urban spaces in line with the needs of the new generations (Antonova et al., 2019). As Voronina (2015) points out, it is necessary to look at talent training in different areas of knowledge as part of public development policies.

In this sense, the look for employability begins to be worked on while still at school, with teaching-learning processes that consider professional and career development within the school curricula. Thus, cities and their public policies can and should consider and develop teaching-learning programs to develop scientific, technological, and behavioral skills capable of better preparing students for future professional activities (Voronina, 2015). Considering the current technological context and the specific demands of the so-called industry 4.0, the importance of understanding the vision of young students regarding the development of a career path focused on the scientific and technological areas is highlighted. Reyes-Ruiz et al. (2018, p. 2) point out that the future vision of a career in a given area is linked to the perception of attractiveness in this area, especially in technology and information – understood as the "fundamental development axes". This understanding is essential to foster public policies to construct a "body" of human resources qualified to operate in these areas.

Dyason et al. (2019) reinforce the importance of the universities' role in local and regional economic development, highlighting the direct and indirect benefits for cities with these educational structures. The educational level of a city, especially higher education, is

positively related to the dynamics of large cities regarding the average salary level and economic growth due to the absorption and generation (flow) of knowledge (Costa & Kahn, 2000). On the other hand, the attractiveness of cities as a place to live (in a broad sense which includes professional life) also involves the vision of students who, in the construction of their life and career plans, affect the flows of territorial mobility (Antonova et al., 2019). In this sense, Hao et al. (2020) shed light on an essential aspect for city planning: if, on the one hand, educational development is important to foster the creation of trained human resources (the so-called talents, crucial for long-term planning and development), on the other hand, the retention of these talents can be harmed if the conditions in these cities affect the desire to remain in the big urban centers. As reported by Abramova et al. (2019, p. 99), "it is important to give special attention to students as potential drivers of territorial development (city, region, country), creating an attractive urban environment".

It is noteworthy that the topics discussed here require special attention when dealing with differences between developed and developing countries. In the latter, one must consider substantial challenges for structuring a human resource base qualified to act in the current competitive and technological scenario, with a view to long-term development and sustainability. Furthermore, adverse environments (Shepherd & Williams, 2020) require actions that involve all actors in the ecosystem so that these effects can be mitigated or minimized (Reyes-Ruiz et al., 2018).

Throughout the discussion proposed in this study, several instances are intersected and interrelated when approaching the perspective of careers in context, specifically concerning the perspective of cities. Based on the systematic review undertaken in this study, it is possible noticing that the international literature on the subject encompasses: i) the understanding that cities exist from the notion of ecosystems, in which different instances interrelate (political and legal, economic , human, natural and social/informational); ii) the contextual notion of careers, based on the understanding that, in addition to the individual and organizational perspective, there are several other elements that influence people's professional trajectory; iii) the various possibilities that involve the notion of worker mobility and that promote and influence the circulation of knowledge – this understood as an element of fundamental importance for the ecosystems of cities; iv) the concern with attracting and retaining people, which involves different and related aspects, including the notion of livability, the structure of the labor market, organizational contexts and the educational system; and v) the finding that innovative processes, so dear to contemporary thinking in the context of the current uncertain, volatile and dynamic environment, are directly related to individual and collective well-being.

6. Future Research Directions

The discussion we presented here is aligned with the idea of seeing "careers and their management as a part of a wide ecosystem" (Baruch, 2015, p. 364). This notion recognizes the interconnectedness and interdependence of each actor – individuals, organizations, and nations/societies – in a dynamic system. In this system, mobility, adjustments, and adaptations are fundamental elements (Baruch, 2015). In this sense, we proposed an integrated view that crosses the four main categories discussed in the international academic literature (table 2). Even though these categories are commonly discussed with little overlap (figure 4) and are spread into many knowledge fields (table 1), we believe that considering their interrelation could significantly contribute to the discussion of careers in context. In order to foment future research directions and based on former literature, we crossed out the four approaches – "City livability and attractiveness", "Labor market and mobility", "Organizational work and expatriation", and "Educational system". It allows us to make 16 assumptions that may guide future empirical investigations.

Table 2. General assumptions of the interconnection between the four approaches (our elaboration)

Approaches	City livability and attractiveness	Labor market and mobility	Organizational work and expatriation	Educational system
City livability and attractiveness	**A1:** Good places to live positively influence the attraction and retention of talents.	**A2**: High levels of livability positively influence labor markets through the attraction and retention of talents.	**A3:** Low livability rates exert influence on monetary and non-monetary benefits offered by organizations.	**A4:** High levels of livability positively influence the flow of knowledge
Labor market and mobility	**A5**: Good places to live and work positively influence the future vision of a career in that location.	**A6**: Good labor markets positively influence the attraction and retention of talents.	**A7**: The flow of ideas and knowledge positively influence the labor market, organizational work environment, and career development.	**A8:** The expectation of future returns in the labor market influence the investment in education on the individual level.
Organizational work and expatriation	**A9**: A positive view of the city's livability, attractiveness, and organizational work environment negatively influence the brain drain.	**A10:** The workers' mobility between different labor markets and organizations positively influences the flow of knowledge.	**A11**: A good organizational work environment positively affects the attraction and retention of talents.	**A12**: The interconnection between local industry and the educational system positively affects both and the individuals.
Educational system	**A13**: A good educational system positively influences local development and livability.	**A14**: An educational system oriented to the development of STEAM skills positively influences the labor market.	**A15**: An education system oriented to local industry needs positively influences the organizational work environment.	**A16**: The quality of the educational system positively affects the city livability, labor market, and organizational work environment in the long term.

It is also important to consider that these four instances, as contextual factors, can be related to the broad notion of sustainability. Environmental, social, and governmental issues can act as constraints and/or enablers for career development (De Vos & Van der Heijden, 2017) and then linked to the 2030 Agenda and the Sustainable Development Goals – SDGs (United Nations, 2015). We then suggested some research questions based on the four main approaches addressed in this study and their relations to some SDGs (table 3).

Table 3. Future research questions between the four approaches based on the SDGs (our elaboration)

Approach	Future Research Directions	SDGs Addressed
City livability and attractiveness	**RQ1**: How do citizens perceive the city infrastructure in a matter of quality, reliability, sustainability, and resilience?	9.1; 11
	RQ2: Is the city public sector concerned with issues related to waste, water, sanitation, and affordable, reliable, sustainable, and modern energy?	6; 7; 12.5
Labor market and mobility	**RQ3**: Does the labor market offer equal opportunities for women and men, including leadership positions?	5.1; 8.5
	RQ4: Does the city labor market be perceived as diverse, technological, and innovation-focused?	8.2
	RQ5: Are there good opportunities for entrepreneurship for micro, small, and medium-sized enterprises?	8.3; 9.3
Organizational work and expatriation	**RQ6**: How do workers perceive the organizational environmental opportunities in a matter of gender equality?	5.1; 5.5
	RQ7: Are there decent work opportunities for young workers?	8.5
Educational system	**RQ8**: How do students and teachers perceive the education they receive in a matter of effective learning outcomes?	4.1; 5.b
	RQ9: How are the STEAM and sustainability axes being aggregated in educational curricula?	4.4; 4.7
	RQ10: How are cities planning their public educational policies related to the SDGs?	4

7. Final Considerations

Understanding careers in the context of cities – these seen as a microcosm where social life takes place – has direct implications for "individuals, organizations and urban policymakers" (Tams et al., 2021, p. 15). Thus, in direct contrast to the overvaluation of

individual aspects in professional trajectories, recent studies on careers have highlighted the context as a structure that limits and imposes adaptation needs. By aligning these perspectives, this study aimed to analyze how the concepts of careers and cities have been articulated in international production from the perspectives of ecosystems, innovation, and sustainable development. To this end, we had identified in the literature four main topics of interest for the discussion we presented here. They involve several issues such as employability, labor market, educational system, talent, human capital, attractiveness, and livability. Recognizing: i) that innovation is a force for development (Schumpeter, 1985); ii) that this movement is not linear, simply pulled by markets or pushed by technology (Leydesdorff, 2012); and iii) that the State is not the only one responsible for transforming cities, regions, and countries, the importance of integrated actions and partnerships between the public sector, private initiative and other organized entities is reinforced. These initiatives, especially in the view of innovation ecosystems, have become increasingly frequent in urban centers.

Through work, innovation collectively materializes itself in the daily lives of citizens, thus generating a source of income and being a means of personal fulfillment. However, little or nothing is said about the practical labor instance in which innovation ecosystems develop. On the other hand, the study of labor relations and people management ignores their intimate relationship with innovative processes, generally involving a posteriori issues, such as the network of norms that regulate employment relations (Howe, 2017) or the impacts on the work environment at the organizational level. In this sense, it is highlighted that "the geographic dimension can be a tool for the development of social connections, but it does not develop these connections by itself" (Mulas et al., 2015, p. 8).

This study brings contributions to areas that, in general, have shown slight approximation in academic literature. This research can then foster new discussions, contributing both to the debate about careers and the development of innovation ecosystems and the debate on sustainability, from an approach that directly reflects on the practical life of citizens, that is, the world of work. The study presented here also has practical relevance from the perspective of economic and social development. Finally, it can provide subsidies to encourage and articulate the active participation of individuals, organizations, and public entities. Expanding our understanding of the interrelationship between these instances allows us to contribute to the facilitation and promotion of the citizens' employability. Also, it can foster competitiveness' improvement of cities, regions, and countries.

We are aware that this article has some limitations. We can point as a constraint the terms' and designs' choice. We can also point to using the papers' abstracts for the semantic analysis in the software (even though the authors have entirely read the articles for the discussion). We suggest, then, future studies that can deepen the discussion we presented here. In continuity, empirical research could be an excellent opportunity to understand how the categories presented in the literature are being handled in reality. Quantitative studies conducted by researchers in different cities, countries, scenarios, and contexts could expand the potential of this research and its contributions to society.

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