

# THE CONTRIBUTION OF THE PSYCHOLOGY OF RELIGION AND SPIRITUALITY TO THE DEVELOPMENT OF SUSTAINABILITY IN SMART CITIES

*A CONTRIBUIÇÃO DA PSICOLOGIA DA RELIGIÃO E DA ESPIRITUALIDADE NO DESENVOLVIMENTO DA SUSTENTABILIDADE EM CIDADES INTELIGENTES*

*LA CONTRIBUCIÓN DE LA PSICOLOGÍA DE LA RELIGIÓN Y DE LA ESPIRITUALIDAD EN EL DESARROLLO DE LA SOSTENIBILIDAD EN CIUDADES INTELIGENTES*

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## ABSTRACT

Considering religion and spirituality as essential components of human experience and also associated with better mental health, this study discusses their impact on the development of sustainability in Smart Cities. The main objective of the study is to identify the application of the Psychology of Religion and Spirituality for aligning these areas with the Sustainable Development Goal 3 (SDG-3) proposal for cities. An integrative review methodology was used on 23 relevant studies that promote discussion on the Psychology of Religion and Spirituality in the context of smart and sustainable cities. These studies were selected based on pre-defined inclusion and exclusion criteria, with data collection for subsequent analysis. The main findings observed that aspects such as interconnection, values, ethics, and health and well-being are facets of religion and spirituality that can be integrated into the construction of smart cities. The paper concludes that religion and spirituality can play a crucial role in shaping smart cities, and offer pathways for achieving sustainability. Further studies on the topic and its application in smart city development projects could better explore this interaction.

## KEYWORDS

Psychology; Sustainable Cities; Smart Cities; Mental Health.

## RESUMO

*Considerando a religião e a espiritualidade como componentes essenciais da experiência humana e também associadas com melhor saúde mental, realiza-se a discussão sobre o seu impacto para o desenvolvimento da sustentabilidade em Cidades Inteligentes. O objetivo do estudo é identificar a aplicação da Psicologia da Religião e da Espiritualidade para o alinhamento das áreas com a proposta da ODS-3 para as Cidades. Foi utilizada a metodologia de revisão integrativa em 23 estudos relevantes que promovem discussão sobre a Psicologia da Religião e da Espiritualidade no contexto de cidades inteligentes e sustentáveis. Esses estudos foram selecionados com base em critérios pré-definidos de inclusão e exclusão, com coleta de dados para posterior análise. Como principais resultados foi observado que aspectos como interconexão, valores, ética, e a saúde e o bem-estar são aspectos da religião e da espiritualidade que podem ser integrados na construção de cidades inteligentes. O trabalho conclui que a religião e a espiritualidade possam desempenhar um papel crucial na formação de cidades inteligentes, e oferecem caminhos para que a sustentabilidade seja alcançada. Mais estudos sobre*



*o tema e sua aplicação em projetos de desenvolvimento de cidades inteligentes podem explorar melhor essa interação.*

## **PALAVRAS-CHAVE**

*Psicologia; Cidades Sustentáveis; Cidades Inteligentes; Saúde Mental.*

## **RESUMEN**

*Considerando la religión y la espiritualidad como componentes esenciales de la experiencia humana y también asociadas con una mejor salud mental, se realiza la discusión sobre su impacto en el desarrollo de la sostenibilidad en las Ciudades Inteligentes. El objetivo del estudio es identificar la aplicación de la Psicología de la Religión y de la Espiritualidad para el alineamiento de las áreas con la propuesta de los ODS-3 para las Ciudades. Se utilizó la metodología de revisión integrativa en 23 estudios relevantes que promueven la discusión sobre la Psicología de la Religión y de la Espiritualidad en el contexto de ciudades inteligentes y sostenibles. Estos estudios fueron seleccionados con base en criterios predefinidos de inclusión y exclusión, con recopilación de datos para su posterior análisis. Como principales resultados se observó que aspectos como la interconexión, los valores, la ética y la salud y el bienestar son aspectos de la religión y la espiritualidad que pueden integrarse en la construcción de ciudades inteligentes. El trabajo concluye que la religión y la espiritualidad pueden desempeñar un papel crucial en la formación de ciudades inteligentes y ofrecen caminos para que la sostenibilidad sea alcanzada. Más estudios sobre el tema y su aplicación en proyectos de desarrollo de ciudades inteligentes pueden explorar mejor esta interacción.*

## **PALABRAS CLAVE**

*Psicología; Cidades Sostenibles; Cidades Inteligentes; Salud Mental.*

## 1. INTRODUCTION

The Psychology of Religion and Spirituality is a recognized field of psychological and psychiatric research (MOREIRA-ALMEIDA; LUCCHETTI; KOENIG, 2014; SILVA et al., 2022). The World Health Organization (WHO) acknowledges the spiritual and religious dimension of humans as one of the determining aspects of the concept of quality of life (MACHADO; HOLANDA, 2016; PLAUTO et al., 2022). In addition to being associated with a lower prevalence of depression and anxiety, it is also found that religious participation in institutions fosters greater social connections and a decreased sense of isolation and loneliness (MOREIRA-ALMEIDA; LUCCHETTI, 2016; RONNEBERG et al., 2016).

Based on the ISO - International Organization for Standardization model, smart cities can be conceived from a certain number of indicators, among them: Mobility, safety, health, housing, among others (BENCKE; PEREZ, 2018; ABREU; MARCHIORI, 2023). Therefore, an integrative perspective on the scientific knowledge about the Psychology of Religion and Spirituality with the development of Smart Cities is essential for the construction of Sustainable Cities, aiming to realize the SDG 3 "Health and well-being" (SILVESTRE, 2016; SÁ; BENEVIDES, 2019).

The main objective of this study is to identify the application of the Psychology of Religion and Spirituality for the alignment of the areas with the proposal of SDG-3 for the Cities, seeking to answer the question: Can spirituality be a pathway to the development of sustainability in Smart Cities?

## 2. LITERATURE REVIEW

Current urbanization is associated with emerging mental health problems, influenced by social, economic, and environmental factors, such as social disparities, pollution, and lack of contact with nature (VENTRIGLIO et al., 2021). Mental disorders such as depression, psychotic experiences, and stress are also associated with the process of urbanization, especially in developing countries (LECIC-TOSEVSKI, 2019).

This mental health scenario may be associated with physical inactivity, urban design and planning, housing conditions, and the quality of city architecture (IRAVANI, 2020). Urban displacements observed in society can also be a factor when considered as reinforcing the status of

surplus of certain groups, distancing them from access to employment, education, and care networks, directly impacting the mental health of these groups (GILLESPIE; HARDY; WATT, 2021).

In this environment of transformation experienced in the urban space where health is at serious risk, a new way of experiencing the territory has emerged: Smart Cities (LOPES, LEITE, 2021). Aiming to enhance the efficiency of public services with the advancement of technology, it is expected to also impact sustainability goals, promoting improvements in urban quality of life and greater resilience to urban centers, thus committing to environmental protection, social justice, and economic prosperity (CHIUSOLI; REZENDE, 2019; PROENÇA JUNIOR; DUENHAS, 2020; ANDRADE; FRANCESCHINI, 2017).

Observing the impacts on the mental health of populations in urban environments, it is evident that elements such as spirituality and religion can be beneficial in fostering discussions about possible interventions in this context. This is because spirituality/religiosity serve as significant coping resources in people's lives (MONTEIRO et al., 2020). This coping is described by Avezum et al. (2019) as either positive or negative, with the former associated with resilience and a better quality of life, and the latter with passive acceptance and psychological distress.

Considering religion as a constitutive element of human subjectivity and a giver of meaning to suffering, Dalgarrondo (2008) argues that it holds a privileged position in the dialogue between health and mental disorders. Some organizations officially recognize its role in human health. Consequently, the Psychology of Religion and Spirituality is Division 36 of the APA (American Psychological Association). It also holds a prominent position in organizations such as the American College of Physicians, American Medical Association, American Nurses Association, World Psychiatric Association, American Psychiatric Association, and Royal College of Psychiatrists (MOREIRA-ALMEIDA; LUCCHETTI; KOENIG, 2014).

Recognized by the UN in September 2015 as one of the Sustainable Development Goals (SDG 3.4), mental health emerges as one of the priorities for global development over the next 15 years (VOTRUBA; THORNICROFT, 2016). To achieve the SDGs, interdisciplinary dialogue and debate are essential (LIEN, 2018). Therefore, considering spirituality and its influential role in mental health is fundamental in discussions promoting sustainable development.

### 3. METHODOLOGICAL PROCEDURES

For the study's execution, we will use an integrative research methodology (SOUZA; SILVA; CARVALHO, 2010) employing the descriptors a) "Psychology of Religion and Spirituality", b) "Smart and Sustainable Cities", and c) "Health and Well-being in Smart and Sustainable Cities". Literature will be explored for articles that, regardless of language or publication period, address the relationship between religion and society/community, as well as the role of smart and sustainable cities in the realm of health. Inclusion criteria will encompass texts that clearly and substantially discuss these themes, whether or not they establish an explicit connection between the two topics. Conversely, we will exclude works that, even if mentioning the subjects of interest, do not provide specific knowledge on the topic or lack scientific rigor. Following the selection of studies, we will undertake critical reading, extraction of relevant data, and the subsequent analysis and synthesis of the results.

### 4. ANALYSIS AND DISCUSSION OF RESULTS

The research involved the analysis of 23 scientific articles found using the descriptors. When evaluated based on the inclusion and exclusion criteria, 15 studies were found to be compatible with the analysis proposal and the research objectives. Among these, 7 were suited to descriptor a) "Psychology of Religion and Spirituality"; 10 matched descriptor b) "Smart and Sustainable Cities"; and 10 aligned with descriptor c) "Health and Well-being in Smart and Sustainable Cities". Following this, Table 1 will be presented, which will include the analyzed texts and the applied criteria.

The article by Gilbert and Parkers (2011) highlights the desire of mental health service users to have their spiritual dimension addressed by professionals. In the social dimension, the impact of spirituality is the creation of potential mobility in which the existence of something sacred creates a space in which different people can meet and relate (VEER [org.], 2015). In this encounter, these interlocutors are influenced in the construction of their value systems and behavioral repertoire (VLASENKO; IVANOVA, 2017; GHONIMI, 2021). This possibility of relationship and transformation offered by the spiritual dimension in contact with the social dimension paves the way for interdisciplinary discussion with the study on architecture, which, in dialogue with religiosity, is seen

by Srivastava, Sriver, and Nash (2020) as an agent of construction and articulation of physical and social space, of engagement and coexistence, that can define and build symbolic identities of religious communities, developing in the relationship the strength and resources necessary for these communities. This can be complemented by the argument defended by Brennan (2020), which observes the great contemporary relevance of discussing religion in the public space, which, although subject to criticism, offers pathways for promoting a more inclusive and compassionate society.

Discussing this theme in public space, although relevant and challenging, requires great care on the part of planners. In India and Asia, insightful policies are designed to align proposals for sustainable urban development and planning with the religious aspects of the territory (NARAYANAN, 2014). Mahanjan and Mane (2023) advocate a lasting and complex history on the interrelation between spirituality and Indian architecture, so that for the authors there are great advantages to infusing spirituality in today's society, such as health improvement, cultural preservation, and community development. Considering future planning without taking into account this integration of proposals is unthinkable for Sandercock (2006), when considering both elements indivisible, the social system and architecture are thus marked by the religious/spiritual dimension (BECCI, BURCHARDT; GIORDA, 2017; MAHDNEJAD, AZEMATI; HABIBABAD, 2019). As an example of this relationship, there is the project of the Universal City Auroville, an ecovillage located in the south of India built with the spiritual perspective of human evolution through the practice of integral yoga, being conceived by its founders as a place of material and spiritual research for the sake of human union, which also integrates into its scope of activities sustainable practices that have proven their success in providing low-cost ecological solutions to the challenges of sustainability (VENKITARAMAN; JOSHI, 2022).

Zavratnik et al. (2020) and Keshavarzi, Yldirim, and Arefi (2021) are authors who argue that sustainability can only be effectively achieved through integrated communities, not just through the integration of technologies. Although IoT (Internet of Things) resources can promote mental health (VAHDAT-NEJAD et al., 2022), the unity of a community is the axiomatic axis for the realization of sustainability. An example of this relationship is described by Tabb (2016) in a case study on the Serenbe community in the United States of America, where he identified a society that incorporated a balance between the natural

and the urbanized with an emphasis on sustainability and a deep relationship with nature. Through a strong sense of community, they visualize and project a secular-sacred community in contemporary times. The intersection between life in integrated communities and sustainability can be seen from the philosophical perspective of Martin Buber presented by Benedikt (2016), who observes the sacredness emerging from interpersonal connections and facilitated by the built environments for this purpose, as they create space for ethical and creative actions among individuals. From this perspective, the author emphasizes that architecture can still evolve significantly by focusing more on the human being and the development of interpersonal relationships. In this way, the concept of "value-sensitive design" by Helbing et al. (2021) emerges as a pathway to this more human-centered vision and contemporary needs, particularly in building sustainability in cities by integrating ethics, law, and culture for a sustainable, global, and human-centered technological revolution, focused on complete human well-being. One possible foundation for constructing this ethic are the values found in the experience of spirituality, which, by aligning with sustainable management, are also associated with a deep sense of social responsibility (ZSOLNAI, 2015).

Finally, when considering SDG-3 "Health and Well-being," the research by Ferreira (2021) suggests that smart cities are moving towards a higher quality of life for citizens and are better employing health resources to control pandemics, such as COVID-19 (MÜLLER; SILVA, 2021; KHAYAL; FARID, 2017). This appropriate planning of resources, especially health resources, to reduce vulnerabilities through a systemic and complex vision of the city provides resilience for a city, as it values intersectoral actions focused on meeting needs and accessing opportunities for agents to intervene (SOTTO et al., 2019). As an example of discussion, Porfírio et al. (2022) argue that organizational religious practice is fundamental for maintaining good mental health but was the subject of much debate and uncertainty in the political scenario during the COVID-19 pandemic period, which questioned the resilience capacity of urban planning to intervene and assertively meet the immediate needs of citizens.

Therefore, smart cities have great potential for projection and execution in addressing social problems and achieving sustainability goals, creating more equitable and habitable environments (TRENCHER; KARVONEN, 2019), and a resilient infrastructure through the integration of architectural elements and urban

planning that aim for the development of appropriate prevention and intervention strategies (AHMED; PARRACK, 2023). The transition to resilient planning requires a multi-scalar process in the city's sectors that can meet the speed, form, and characteristics of the necessary changes (CRANE et al., 2021), given that efforts that do not adopt a holistic, inter-scalar, and inter-level perspective encounter resistance from the other elements and scales of the system (KRUEGER et al., 2022). The study's conclusions are presented below.

Author/Year	Objectives	Results	Descriptor
P. Gilbert; M. Parkers / 2011	Describe the research program on spirituality and mental health of the Birmingham and Solihull Mental Health NHS Foundation Trust (BSMHFT).	Those who use mental health services increasingly claim they wish the spiritual dimension of their lives to be addressed by professionals.	a)
Irene Becci; M. Burchardt; M. Giorda / 2017	Discuss cities as post-secular and super-diverse elements.	Religious groups have shaped cities leaving lasting architectural marks on them.	a)
M. L. Di Silvestre / 2017	Identify new ways of environmental protection and waste reduction for a new eco-sustainable lifestyle.	The Eastern worldview offers a unifying perspective of science and religion by bridging the gap that emerged over time and reflected in many Western cultures and reverberated in many community development models.	b)
J. MahdiNejad; H. Azemati; A. Habibabad / 2019	Conduct interviews and a literature review on the role of religion in mental health related to architecture.	Religious beliefs and spiritual practices prevent spiritual and physical diseases, as well as mental diseases, while simultaneously reducing the recurrence of diseases and their symptoms.	a)
P. Veer (Org.) / 2015	The book seeks to highlight the creative and innovative role of urban aspirations in Asian cities.	In their potential and current mobility, the sacred creates a social space in which everyone can meet.	a)
L. Vlasenko; I. Ivanova / 2017	Analyze the formation of social values in young people from big cities.	The analysis confirmed that the value system held by young people is strongly influenced by the urban environment and the processes taking place within it.	b) c)
A. Ferreira / 2021	Identify the conceptual relationship between smart cities and citizens' quality of life.	Twelve key concepts were found that demonstrate how to relate a smart city and the quality of life of its citizens.	a) c)
L. Sandercock / 2006	Discuss the role of religiosity and faith in future planning.	The topic between faith and religiosity cannot be avoided by academics and should not be divided between spiritual and practical life.	a) c)
Y. Narayanan (Org.) / 2014	Explore the historical and ongoing influence of religion in urban planning, design, space utilization, urban identities, and communities.	The topic between faith and religiosity cannot be avoided by academics and should not be divided between spiritual and practical life.	a) b) c)
D. Helbing, et al. / 2021	Promote smart cities that value ethics, citizen participation, and sustainability, in addition to technological efficiency.	The text emphasizes the importance of integrating ethics, law, and culture into a digital design that promotes self-management and resilience, contributing to a global sustainable technological revolution.	b) c)

Author/Year	Objectives	Results	Descriptor
I. Ghonimi / 2021	Discover the existing correlation between people's familiarity with ICT and changing behavioral patterns.	Smart cities have significant implications in changing urban behavior patterns, city spatial structure, and urban social sustainability.	b)
G. Trencher; A. Karvonen / 2019	Explore how the pursuit of greater health and well-being has expanded smart city activities beyond technological innovation to directly impact residents' lifestyles and become more socially relevant.	Smart cities have great potential to be designed and implemented to address social issues and achieve more sustainable, equitable, and livable cities.	b) c)
M. Crane, et al. / 2021	Consider the possibility of how to frame and unpack the transformation at the city level towards synergistic benefits for urban health and environmental sustainability.	Urban transformation needs to be a multi-scalar process across city sectors to meet the scale, speed, and form of required change.	c)
I. S. Khayal; A. Farid / 2017	Answer the question of how to design smart cities taking into account the health and well-being of citizens.	Smart city initiatives can actively impact health, rather than passively waiting for it to happen.	b) c)
L. Müller; T. L. Silva / 2021	Analyze urban health indicators of Passo Fundo/RS, seeking to understand the interrelation of these indexes with the epidemiological data of COVID-19.	Cities that monitor health indicators and implement Smart City strategies showed better results in controlling the COVID-19 pandemic.	b) c)

**Table 1** - Texts analyzed and considered for the research, showing authors, year of publication, objectives of the studies, results, and descriptors used.

Source: Authors.

## 5. CONCLUSION

The integrative review conducted in this study highlights the crucial role that the Psychology of Religion and Spirituality can play in the development of smart and sustainable cities. The studies reviewed show that religion and spirituality not only influence individual behavior and well-being but also have the potential to impact the way smart cities are designed and operated. Thus, it is understood that the objective of the study was achieved and discussed with the various works analyzed.

Interconnection and community, values and ethics, and health and well-being are all aspects of religion and spirituality that can be integrated into the construction of smart cities. These elements can help ensure that smart cities are not only efficient and offer a quality of life but also move with quality and assertiveness towards sustainable development. However, it is also important to recognize that the application of religion and spirituality

in the context of smart cities can vary depending on the specific cultural and religious context. Therefore, it is up to urban planners and researchers to consider these differences when integrating religion and spirituality into the construction of smart cities.

Thus, three fundamental topics are highlighted in which religion and spirituality can be pathways for the development of sustainability in Smart Cities: 1) **Interconnection and Community**, by offering environments for learning and building values, in addition to fundamental social interaction for mental health. 2) **Values and ethics**, since religion and spirituality often provide a set of values and an ethical framework for individuals, which are reflected in their behaviors, practices, and future planning. 3) **Health and well-being (SDG-3)**, a theme that is a major highlight of the proposal of smart cities and fundamental for achieving SDG-17 and which is associated with the practices of religiosity and spirituality in the population.

This study contributes to the existing literature by highlighting the importance of the Psychology of Religion and Spirituality in the formation of smart and sustainable cities. For the future, it will be necessary to explore which practices and planning in religion and spirituality are important for achieving sustainability in Smart Cities, alongside an assessment of the impact that the discussion of these themes in the training of managers and planners may have on their future constructions.

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### COMO CITAR ESTE ARTIGO:

PORFÍRIO, Gustavo Bianchini; STEFANI, Silvio Roberto; MAGANHOTTO, Ronaldo Ferreira. **MIX Sustentável**, v. 10, n. 3, p. 49-59, 2024. ISSN 2447-3073. Disponível em: <<http://www.nexos.ufsc.br/index.php/mix-sustentavel>>. Acesso em: \_/\_/\_doi: <<https://doi.org/10.29183/2447-3073.MIX2024.v10.n3.49-59>>.

**SUBMETIDO EM:** 24/10/2023

**ACEITO EM:** 11/04/2024

**PUBLICADO EM:** 12/08/2024

**EDITORES RESPONSÁVEIS:** Lisiane Ilha Librelotto e Paulo Cesar Machado Feroli

### Record of authorship contribution:

CRedit Taxonomy (<http://credit.niso.org/>)

GBP: conceptualization, formal analysis, Investigation, methodology, visualization, writing – original draft and Writing – review & editing

SRS: conceptualization, supervision, writing – original draft and writing – review & editing.

RFM: conceptualization, supervision, writing – original draft and writing – review & editing.

**Conflict declaration:** nothing has been declared.