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RURALITY AND ETICITY

IN SOCIAL PERCEPTION AMONG UNIVERSITY STUDENTS: A CROSS SECTIONAL STUDY

RURALIDAD Y ETICIDAD EN LA PERCEPCIÓN SOCIAL DE ESTUDIANTES UNIVERSITARIOS: UN ESTUDIO TRANSVERSAL

Fernando Carlos Agüero-Contreras[1]
E-mail: fernandoaguero636@gmail.com
ORCID: https://orcid.org/0000-0002-7055-9534
[1]Universidad "Carlos Rafael Rodríguez". Cienfuegos. Cuba

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ABSTRACT

Social perceptions provide outstanding trials about various aspects of the surrounding reality. These processes show essential contents of primary and secondary socialization. A simple random sampling was used to select 100 university students of different degrees, years of study and nationalities. The cross-sectional study was based on a combination of quantitative-qualitative methods, using a questionnaire which measured the students' rurality perceptions, the analysis of documents, plus unstructured interviews. A factor analysis was developed with the SPSS processor, determining the five essential factors involved in the perceptions with low - medium scores. The one-factor analysis of variance (ANOVA 1) showed that the mean values of these perceptions are symmetrical, only providing statistically significant differences in the comparisons of Cuban students with respect to Latin American, Caribbean and Afro-Asian students. The starting hypothesis is only partially fulfilled, requiring the theoretical and empirical deepening on these results. It is necessary to evaluate the contents, the ways in which essential aspects of the agricultural economy, rurality and life in the countryside are treated among the different higher education careers. A deeper insight into the context enhances the building of rural perceptions and their contents of eticity

Keywords: Rural-perception, university-students, Cienfuegos-Cuba

RESUMEN

Las percepciones sociales aportan juicios relevantes sobre diversos aspectos de la realidad circundante. Esos procesos muestran contenidos esenciales de la socialización primaria y secundaria. Con un muestreo aleatorio simple fueron seleccionados 100 estudiantes universitarios de diversas carreras, años de estudios y nacionalidades. El estudio transversal se sustentó en una combinación de métodos cuantitativos-cualitativos, teniendo por base un cuestionario que midió de las percepciones de los estudiantes acerca de la ruralidad, el análisis de documentos, añadidas entrevistas semiestructuradas. Con el procesador SPSS se desarrolló un análisis factorial, determinando los cinco factores esenciales que intervienen en las percepciones con puntuaciones bajas - medias. El análisis varianza de un factor (ANOVA 1) demostró que los valores medios de esas percepciones son simétricos, solo aportando diferencias estadísticamente significativas en las comparaciones de los estudiantes cubanos respecto a los latinoamericanos, caribeños y afroasiáticos. La hipótesis de partida solo se cumple parcialmente, requiriendo ampliar como profundizar teórica y empíricamente estos resultados. Se impone valorar los contenidos, las maneras en que se tratan aspectos esenciales de la economía agropecuaria, la ruralidad como la vida en el campo entre las diferentes carreras de la educación superior. Un adentramiento en el contexto mejora la formación de percepciones rurales y sus contenidos de eticidad

Palabras Clave: Percepción- rural, estudiantes-universitarios, Cienfuegos-Cuba.

INTRODUCTION

The reference to life in the countryside, the agricultural economy or the processes of rural life, its transformations, conflicts, contradictions and progress can be included under the concept of rurality, a concept that is assumed in the study presented here. In Cuba these processes, although they have kept an emancipating perspective, have not always offered the best results, especially in food production. Even though the most recent history has confirmed the agricultural base of the national economy, the participation and integration of young people in these processes has become essential but not successful. The study was framed in the time interval 2011 to 2015.

Perception is a basic element of the worldview of individuals in society. For emerging econmy countries with a high agrarian heritage and a culture closely linked to the agricultural economy, it is essential to appreciate, describe and value the perception that new generations are building on these realities. The impacts of global processes since the end of the 20th century and the beginning of the 21st century have generated a complexity around rurality and the ways in which it is approached, interpreted and perceived. Perceptions of a social phenomenon are expressed in opinions, conceptions and points of view, which determine in an important way a level of individual and social behavior.

Although education in Cuba has maintained an anchorage in the Martian conceptions of education and consequently, the principles of linking school with life, theory with practice and education with work, have been in the essence of these processes, they have not always provided all that was expected, especially in relation to the rural environment. The results in the training of higher education professionals oriented to work in rural areas, despite the opportunities that have been offered by the systems of entry to higher education in Cuba, have not shown higher results and for the qualified forces of technicians and professionals linked to these areas, their displacements have been a constant.

This research assumes as its object the perceptions that young university students from different careers have about the countryside, agricultural technologies or rurality in a general sense in the years 2011 to 2014. In this sense, students studying at different stages of higher education were sampled, as well as students from different fields of science studies: social sciences - humanities, natural, technical and economic. Similarly, groups of students from different countries and regions of the world present at the university at the time of the research were interviewed. The objective was to assess the perceptions of groups of young people about rurality during their university studies. Based on the object and objective, a cross-sectional or comparative study was undertaken to verify the hypothesis related to asymmetrical or non-asymmetrical perceptions among the groups studied. It is concluded that the perceptions show ambiguities about rurality, thus verifying part of the hypotheses and arguing the need to increase the content of these topics in higher education for countries with emerging economies in which agricultural production is essential.

THEORY

Everyday human beings, as they advance in their development, capture in subtle and significant ways, various aspects of the sociocultural environment, from which they build a personal worldview of the world. Complex economic, social, cultural, political and ideological dynamics are internalized from the context, as a result of primary and secondary socialization. These processes are also mediated by different anthropological, psychological and sociological components, which also involve cultural identity, traditions, belief systems, lifestyles, technologies, as well as images related to landscapes, the environment, life projects, among others, which are associated with the expansion of a new rurality (Diétima da Silva Bezerra et al., 2021). Particularly relevant in times of globalization is the role of the market, consumption and money, the fetishization of these processes and their impacts, as they become the basis for the construction of social perceptions and representations (Diétima da Silva Bezerra et al., 2021). Technological environments also acquire special relevance, around productive processes, which condition multiple aspects of family and social life, components that are perceived and consumed. These sociological-anthropological and psychological bases, socially and historically conditioned, shape cognitive schemes of perception, evaluation and action, and thus carry an ethical content.

The category of social perception becomes content in several social scientific disciplines, such as social psychology, sociology and social-cultural anthropology, pedagogy, among others. These sciences intervene in the processes of the formation of man as a citizen of the world and resort to their theoretical-epistemological and methodological resources available to enter into the knowledge of the human being, about the world, in its different parts and moments, which is why they are contributors of relevant contents. These disciplines have dealt with multiple aspects related to different aspects of social life, groups and individuals. Social phenomena associated with belief systems, social prejudices, ethnic differences, social exclusion and discrimination have been, among others,

axes from which all social sciences have contributed in the theoretical constructions around social perceptions, representations, subjectivity or the spiritual life of society and its different social groups, components from which the role of these sciences in the management of development is strengthened. However, the subjectivities of rurality and the countryside in general are very complex to change (Boessio & Doula, 2016), (Troian & Breitenbach, 2018).

Pedagogy in general and social pedagogy in particular, require more and more of these approaches to address the teaching-learning processes, from the analysis of educational environments, particularly from the perspective of the context, always determining that their viability and feasibility from the school curricula, will necessarily require continuous or permanent improvements. The curricular approach makes it possible to analyze the real link between theory and practice and between school and life, very relevant principles in educational systems such as the Cuban one. However, when pedagogical practices and didactic systems ignore the context, their potentialities may not unfold in the desired direction. Thus, although the institutions declare themselves to favor favorable, positive visions of rural life, life in the countryside or the agricultural economy, the social practice generated by them can strongly dictate the opposite: a reinforcement of the urban vision and urban culture.

Social perceptions make it possible to know and understand individuals, their perspectives of processes and phenomena of the environment, forming conceptions, opinions and impressions, and consequently expressing themselves as favorable or unfavorable, and materializing in attitudes and behaviors such as liking or disliking, empathy or antipathy. Studies show that social influences produce impacts on the perception of certain social objects, understanding and interpreting from this category other people, communities, scenarios, groups, phenomena or processes (Morales Chuco, 2017). Social perception transcends the physical and external components of the object, which constitute only starting points, to which essential aspects of behavior are added, from which notions, ideas, emotions are gestated. Therefore, perception grants or endows with meaning those things which are perceived. They are a subjective construction to which are strongly articulated the personality traits, the group belongings, the cosmovision of life and the world, the levels of culture, the schooling, the influences of the micro and macro scale, serving as a basis for the interpretation and act over reality.

Likewise, those sociodemographic features mediated not only by the scenario and schooling, but also by the lived experience, the context of development, age, gender, among others, contribute to the construction of social perceptions. In the perception, essential contents of the socializing processes that have intervened in the individual and in the groups in which have developed are present. Thus, in the end, it appears as a guide for social action, actively intervening in social representations. This explains how, from perceptions, individuals and groups capture reality in an active, selective way, with whose information they identify themselves or not, and from which judgments, properties, categories, attitudes and behaviors are elaborated. For this reason, the ethical contents constructed in the sociocultural context of individuals and groups significantly mediate human attitudes and behaviors.

Social perceptions are not disconnected from the socioeconomic, cultural, historical, political, and ideological conditions of the territories where they are produced (Morales Chuco, 2017). In such a way that the most reiterated perceptions give significant meanings and connotations to apparently isolated facts. Therefore, they carry a value content that allows, once expressed, to describe them, evaluate them or even qualify them as: higher, mature, accurate or complete, as well as to evaluate them as carrying less complete, less accurate, unmature or even with intermediate levels between a high and low level. Perceptions may be incomplete, incoherent, outdated, uncritical or even mystical, romantic, decontextualized and therefore may be distant from objective truth, when they are not validated by science.

This approach to perceptions determines that expressions built by young people towards rurality are as complex as the connotations of the subject given in the Latin American region, in other parts of the world and the way taken by public policies on this subject, of which Cuba has not been an exception. The binary or dichotomous urban-rural expression is part of the results inherited from modernity. As recognized by ECLAC (Dirven, 2019), the new rurality is expanding, although the definitions of the process vary from country to country, where the Caribbean region is given as an example, where several countries do not define it, others do so based on the concentration of inhabitants per square kilometers, which is also reflected in countries of the continental area and also in Cuba (Íñiguez-Rojas & Figueroa Fernández, 2018). There is a general lack of consensus on rurality (Wineman et al., 2020), since its dynamics is a complex continuum of interactions (Freitas et al., 2020).

One of the most complex problems in the world is reflected in the capital deficit in rural areas (Kubeš & Chvojková, 2020), to which are added the differences or gaps in the digital world (Rundel & Salemink, 2021), as well as

in relation to critical awareness and criteria about justice (Albritton et al., 2017), inextricably linked to the quality of education and the appropriate role of cultural policies. One of the connotations of these processes, particularly in education, is expressed in the deepening of asymmetries whose reflection is expressed in the possibilities for groups of girls, boys, adolescents and young people and their subsequent access to science, culture, technology, higher education and employment. The persistence of poverty is finally more deeply rooted in these rural scenarios (Meij et al., 2020). The multiple influences, in the short and medium term, of the analyzed indicators, together with the impacts of an accumulation of poverty, added to other social conflicts, encourage migratory movements to urban areas as well as at the international level.

The approaches to sustainable development in the world determine that the undertaking of conceptions and actions towards the work with young residents in rural scenarios is essential. Ireland's experience in working from family farms and supporting young people has had benefits (Stockdale & Ferguson, 2020). In Nepal, favorable results of public policies towards rural youth are shown, with the incentive to multifunctionality of families and the search for non-farm wages (Gautam & Andersen, 2016). In Greece the work with renewable energy sources for rural communities (Apostolopoulos et al., 2020) together with the recognition of expert knowledge, favored decision making among politicians, which impacted young people. Similar technological innovation processes for Europe offered important results as seen in the case of Spain, communities anchored in agriculture. Relevant may also be the actions undertaken from Germany (Feuerbach et al., 2019) all of which favor work from family farms (Wilson & Tonner, 2020). An analysis carried out with young people from Italy, Malta, Holland, Belgium, France, Latvia, Finland and Poland, consider the rural as scenarios where the basic activity is agricultura (Romito et al., 2012), although life there was considered acceptable, it was recognized that the action of policies that favor young people is required. The Chinese experience, coinciding with the previous perspective, promotes the integration of urban and rural communities.

Rurality constitutes a complex phenomenon in the present, in a very particular way due to the processes of the environment, the role of young people and the attention required by them. Globalization, the market, money, consumerism, the fetishization of reality, become key contents of everyday culture, which weaken cultural identity, productive processes and therefore the rural area is open to the disenchantment of the world, a very complex process that can have very negative effects in these areas. Therefore the role of subjectivity in the younger generations articulating rurality and sustainability becomes a transcendent issue for the present and towards the future (Boessio & Doula, 2016). The rural issue therefore demands to work actively in strengthening institutions such as the family, educational institutions at all levels and including the ascending role of the university (Troian & Breitenbach, 2018). The study of the perceptions of rurality, constitutes a necessity, as they articulate the vicissitudes that accompany the socioeconomic development of these processes in these areas and varied scenarios of society, where the inconsistencies and incoherencies in many contents of public policies, cement inaccuracies, prejudices, stigmas, as elements of rejection or disapproval, which also are not always expressed in equal intensity and scope in the countries and regions. The following research question is therefore formulated:

What perceptions of rurality do university students possess from their different genders, ages, careers, nationalities and years completed in training, particularly in the period 2011 to 2015?

The following scientific hypothesis is posed:

University students' perceptions of rurality are distinguished by their ambiguous nature, low - medium grades or scores, reflect differences in the scientific areas of training (technical, natural and social sciences), by regional-national backgrounds, and by academic location in initial, intermediate or final years of higher studies.

METHODOLOGY

The present research combines the quantitative or analytical empirical paradigm with the qualitative one; due to the complexity of the subject it addresses (Strijker et al., 2020). It is developed on the basis of a non-experimental design, focused on an explanatory - transectional or cross-sectional study. Explanatory research is more structured than other studies, offering possibilities for other purposes such as describing, correlating or associating processes or phenomena under investigation. This type of study seeks trends in phenomena at the social level, based on work with parallel groups, supported by comparative methods (Hernández Sampieri et al., 2014). All of which facilitates the discovery of interrelationships and interdependencies between the objects, processes or phenomena being studied, including ethical contents of behavior. .

From the epistemological point of view, the research was deployed by resorting to principles such as the dialectic of general, with the particular and the singular. This positioning was essential to value the ways in which the urban-rural dynamics have been refocused in the

world, in the Latin American and Caribbean region and in Cuba. It has been relevant to overcome the binary or dichotomic vision inherited from modernity and refocus its contemporary dialectic. The approaches of Food and Agricultural Organization (FAO) and Economic Council for Latin America and Caribbean (ECLAC) to face rural development have deeply and meaningfully contributed with particular significance and special relevance for region. This required an appraisal of the historical trajectory of the technology associated with agriculture and livestock farming, as well as other multiple aspects associated with the agricultural or rural economy and its contemporary importance.

Consideration was also given to the cultural and scientific contributions and impacts that urban agriculture has had in subverting even more negative images of rural life and the technologies developed in these areas. The dialectic principle of the new rurality and the changes that have been generated in the world as part of the impacts of globalization, with marked distinctions for the emerging economies, was transcendental. Part of this has meant a return to the best of the traditions of local and historical thinking of the peoples, by revaluing practices, processes and technologies that refocus the development of rurality in a different and progressive way, without increasing danger for agroecosystems, a concept taken from ecology science. In this sense, it was essential to combine the epistemological principles of dialectical theory and practice with the logical-historical approach to assume the changes that have taken place towards the new rurality.

At the theoretical level, analysis and synthesis were worked on, as a basis to focus on conceptions present in Cuban society about rurality. Aspects related to the role of social scientific research, agrarian processes and transformations were approached in order to reason out deficits at the curricular level in the different subsystems of Cuban education. In this sense, the literature review made it possible to visualize the current relevance of the topic and the relevance assumed in the face of the present national and international processes. The induction-deduction allowed the understanding from the practice, in concrete experiences and to advance in the interpretation of the theoretical approaches that have been presented especially in Latin America and in other regions. The recent literature allowed understanding how the panorama of agricultural processes in Cuba has extended its influences in the technical-professional training systems and with special relevance in young people and their perceptions about rural life, technology, life projects, the future, etc. The theoretical-philosophical perspective made it possible to relate how the complex processes of the transformations in the Cuban agricultural economy are still far from solving structural problems and breaking the obstacles that stand in the way of the deployment of productive forces, phenomena that also directly and indirectly, the youth groups live and perceive indistinctly.

From the empirical methods, we worked on alternatives that favored the analysis of social perception from the theoretical scientific experience. The questionnaire is a useful tool to undertake studies that confirm, reject or build theoretical approaches on certain topics (Hernández Sampieri et al., 2014). It is useful due to the time saving and in a practical and important way if it is used to carry out studies from the teaching-learning process, especially in higher education. Based on the Likert scale, a construct is constructed about the perception of rurality that includes the role of agricultural technologies.

From the psychometric point of view, the questionnaire includes two structural components: a general cognitive component, linked to the conception of the countryside, with certain ideas about the evolution and development of rurality, while the second structural component was centered on the perceptions of the most common productive technologies in the agricultural and the whole agrarian economy. Each item required an evaluation on a scale of 1 to 5 points, assuming that a 1 was a disagreement with not appreciating or perceiving the content dealt with in the item, or being in complete disagreement with its contents, while a 5 meant being in complete agreement and satisfied with the proposal made. The first six items concentrate on cognitive-conceptual aspects, while the remaining thirteen focus on more visible elements of the cosmovision of rurality, such as general technological processes and those more centered on more socially recognized crops, both nationally and internationally. The questionnaire with 19 content items focused on the objective of the research, was designed to assess general perceptions of rural areas, their possibilities and technological requirements. It worked with 100 students of higher education.

At the empirical level, we also worked with the unstructured interview as a key element that allowed us to advance in the experiences of professionals, managers and students regarding the processes of perception of rurality and agricultural technologies. This procedure facilitated the path of induction-deduction as a deep understanding of the subject. Likewise, these interviews allowed empirical approaches to visions and perceptions of the phenomenon that became the object of the research, as well as to appreciate connotations granted by teachers of experiences of diverse specialties and their work in different education subsystems, to inquire about the treatments given to rurality, its technologies and to verify points of view

about the principle of linking education with work. The objective of this perspective was to capture understandings of the processes around rurality and their meanings, with particular implications for general education, higher education and young people. Three general education professionals, four specialists from the Ministry of Culture, four specialists and managers from the Ministry of Agriculture, five Cuban university students and four higher education professors and researchers were included. Table 1 below describes important features of the interviewed people

Table 1. Characteristics of interviewed professionals since an unstructured interview

No.	Areas of public policy	Age	Gender	Professional Profile	Years of Professional experience	Present link with agrarian economy		Current job at present
						Yes	No	
	Politechnic Teaching	37	M	Veterinarian	14	X	-	Professor
		47	F	Chemistry	21	-	X	Professor
		52	M	Technology	30	X	-	Professor
	Ministery of Culture	29	F	Philology	6	-	X	Management
		31	F	Art history	8	-	X	Art Instructor
		47	M	Management	15	X	-	Management
		38	M	Sociocultural studies	11	X	-	A rt Instructor
	Agriculture Ministery	40	M	Agronomic Engineering	16	X	-	Producer Advisor
		52	F	Agronomic Engineering	23	X	-	Management
		46	F	Biology	18	X	-	Specialist in phytosanitary
		35	M	Economist	8	X	.	Producer Advisor
	Students of higher education	21	M	Mechanical Engineering	2	X	-	Student
		20	F	Informático	2	-	X	Student
		24	F	Law	4	-	X	Student
		21	F	History	1	X	-	Student
		27	M	Agronomic Engineering	2	X	-	Student
	Professors of higher education	60	M	Sociology	40	X	-	Professor – Researcher
		49	F	Philosofy	29	-	X	Professor – Researcher
		46	F	Mathematic	20	-	X	Professor – Researcher
		38	M	Biology	15	X	-	Professor – Researcher

Source: Author

The analysis of both written and unwritten documents is a technique that provided abundant information to describe and update the state of the art in the object of study, and indicated situations and facts to be studied (Hernández Sampieri et al., 2014). The review of documents took into account several of the economic, social and sociocultural profiles, related to the problem to be investigated and its context. This technique was essential to analyze general and higher education documents, as well as the study of semi-structured interviews developed throughout the research process. Official sources on agricultural statistics, the transformations in the last decades of the 20th century and the

beginning of the 21st century, the deployment of technologies, among others, were important in these activities. Scientific documents on similar contents in other latitudes were also relevant.

Variables under study

A total of six variables were used in the study, in which one was defined as a dependent variable (perception of rurality) with a scale or interval type measurement and five as independent variables: age and years of studying at university, with ordinal measurement, while sex, areas of studying science (university careers), and countries-regions of origin, with nominal measurement. As stated, the methodological approach followed allowed quantitative and qualitative analyses in the work with the variables. Each of them is operationalized below.

A. Social perception of rurality, of the countryside or of the agricultural economy. Without attempting to delve into the theoretical precisions about rurality, the objective is to identify a general perception of life in the countryside, its productive and technological processes, and the capacity or not to distinguish potentialities based on technological changes in agricultural production. It also seeks to identify the prevalence of more archaic conceptions of rural life, the agricultural economy and the countryside as more backward scenarios, technically and culturally backward. Finally, to appreciate how generalizable these conceptions could be rooted not only in Cuba but also in other countries and regions. The search for the described perception was based on a questionnaire with 19 items, whose final values were expressed in a final score from which qualitative indicators were also constructed. The final scores of the referred scale were expressed in the interval from 43 to 87 points with mean $\bar{x}$ = 65.70, a standard deviation DT=10.57 points. This variable showed with the Kolmogorov-Smirnov (KS) test a normal distribution (Z= 1.245, p=0.090).

B. Age. It is reflected in the ages between 17 and 28 years for the students of the different university careers. From the qualitative point of view, this variable was recoded into different dimensions: From 18 to 20 years old, From 21 to 23 years old, More than 24 years old, with which its ordinal measurement was remarked.

C. Gender: Due to its classificatory nature (male, female), it is expressed in its nominal nature.

D. Nationality. This variable, with a nominal measurement, considered the diversity of nationalities and multiculturalism present in the university. In this sense, in addition to Cubans, 11 national groups were considered, reflected in 69 Cubans, 4 from Asia (Bhutan, Laos and Mongolia), 4 from Africa (Guinea Konakry and Angola), 20 from the Eastern Caribbean (Saint Lucia, Haiti, Guyana and Jamaica) and 3 from continental Latin America (Panama). In order to synthesize the information, a recoding was carried out to distinguish three groups of students: Cubans, other Caribbean-Latin Americans and an Afro-Asian group.

E. Year of study: According to the Cuban higher education curriculum at the time of this research, education at this time was centered on 5 years. For this reason, university students are differentiated by years from 1st to 5th year. However, at a qualitative level this variable was expressed with ordinal measurement, being expressed as follows: 1. First year students, 3. Students of intermediate years 2nd and 3rd years and 5. Students of terminal years, 4th and 5th years.

F. Degrees studied at the university at the time of the study and included in the sample: 1. Industrial Engineering, 2. Mechanical Engineering, 3. Law, 5. Sociocultural Studies, 6. History, 7. English Language (Social Sciences), 8. Economics (Economic Sciences). The degree in Sports Science and Physical Culture was considered independently, since it has a strong natural science content (Natural Sciences). By coding the variables in four areas of science, the variable was expressed in a nominal measurement.

With simple random sampling, 10% of the students present in a morning session, on an intermediate day, randomly selected from week 9 of the school year, were selected. Of the 837 students present, 100 from the different careers or courses studied, which represented 11.94% of those present, as well as a proportion of the different national origins, ages, specialties, years studied and gender. We worked with a significance level of 5%. Table 2 details important characteristics of the sample by specialties and years of study of the participants.

Table 2. Characteristics of the worked sample

Carreer studied	YEARS STUDYING					Total
	First	Second	Third	Fourth	Fifth	
Industrial Engineering	4	2	3	1	0	10
Bachelor's Degree in Sciences of Physical Culture and Sports	2	2	2	2	1	9
Bachelor's Degree in Economics	1	2	2	2	2	9
Bachelor's Degree in Accounting	2	4	2	3	1	12
Mechanical Engineering	4	5	2	1	3	15
Computer Engineering	2	3	2	4	1	12
Law Degree	2	2	2	2	2	10
Bachelor's Degree in Sociocultural Studies	2	2	2	2	3	11
Bachelor's Degree in English Language	1	7	0	0	0	8
Bachelor's Degree in History	4	0	0	0	0	4
Total	24	29	17	17	13	100
Source: Author						

From the point of view of gender, 48 students were female (48%) and 52 were male (52%). Ages ranged from 18 to 28 years old. Twenty-seven percent lived most of their lives in the countryside or rural areas while 73% always resided in urban areas.

Statistical Procedures

We worked with the Statistical Package for Social Sciences (SPSS), version 15 for Windows. Measures of central tendency and dispersion were applied in correspondence with the measurements of the variables. The dependent variable was subjected to the Kolmogorov-Smirnov (KS) test to determine its distribution. Depending on the study, the quantitative variables were regrouped and recoded at a certain time during the investigation. Multiple contingency tables were constructed for the qualitative variables, the Kruskal-Wallis test statistic was used and the Mann-Whitney U test was used for the analysis of the sex variable.

The questionnaire was subjected to Cronbach's Alpha reliability test to determine the adequacy of the procedure. Subsequently, the questionnaire was subjected to the Kaiser-Meyer-Olkin test (KMO) and Barttlet's Sphericity Test (López-Aguado & Gutiérrez-Provecho, 2019) as part of the factor analysis to which it was subjected. The factor analysis integrated all of the 19 satisfaction variables conceived, and sought a further criterion of validity and at the same time to verify the connotation of the theoretical constructs constructed. The Varimax Rotation method was used, and the matrix of coefficients of factorial scores, with an ordering by size, suppressing values lower than 0.30

In a second step, a one-factor ANOVA test was applied among subjects in order to compare the interaction effect between the perceptions of rurality with respect to the years studied, the areas of science represented by the students of the ten careers included in the study, the nationalities of origin, and the ages (Hernández Sampieri et al., 2014). Similarly, the eta squared statistic ($\eta 2$) was used to verify the effects of the factors assessed. Four one-factor ANOVA runs were performed for: the three age groups, the three stages of years studied by the students, the three groups of nationalities, and the four scientific areas of origin of the careers involved. As a starting point, Levene's test was used to verify homogeneity, the F test, complemented with Welch's test (due to the inequality of subjects included in the subgroups of the sample). The Bonferroni test (small samples of less than 100 cases), the Gabriel test (due to the heterogeneity of the subgroups of the independent variables studied), and the Games-Howell test were used as post hoc tests. At all times during the investigation, we worked for a significance level equal to or less than 0.05.

RESULTS

A reliability test was carried out on the questionnaire, showing a Cronbach's Alpha with values of 0.740, which is considered adequate for the social sciences. This also verifies a level of certainty of the instrument and of the constructs being worked on. For the factorial analysis, the KMO (Kaiser-Meyer-Olkin) tests were performed, showing a satisfactory

result of 0.727, while Bartlett's test also revealed a positive result (X^2=301.52 gl78, p=0.000), thus verifying the feasibility of the factorial analysis. This analysis, as shown in Table 3, shows that the total variance explained reached 54.18%, which is accepted because an explanation expressed in the percentage interval of 50% to 60% of the cumulative variance explained for social science is considered adequate.

Table 3. Total variance explained

Component	Self Initial Values			Sums of squared saturations of extraction			Sum of the saturations squared by rotation		
	Total	% of variance	% Accumulated	Total	% of variance	% Accumulated	Total	% of variance	% Accumulated
1	3,981	20,950	20,950	3,981	20,950	20,950	3,537	18,614	18,614
2	1,884	9,918	30,868	1,884	9,918	30,868	1,850	9,739	28,353
3	1,642	8,641	39,509	1,642	8,641	39,509	1,762	9,271	37,624
4	1,497	7,880	47,389	1,497	7,880	47,389	1,580	8,314	45,938
5	1,292	6,799	54,188	1,292	6,799	54,188	1,568	8,251	54,188
Extraction method: Principal Component Analysis. Source: Author									

As shown in Table 4, the rotated components define five main factors. With the exception of the fifth factor, formed by only two elements, although it is not discarded, because it contributes to the analysis being developed, the rest were formed by three or more variables, demonstrating an adequate configuration, with good possibilities of explanatory contribution.

Table 4. Rotated component matrix

No.	Indicative items of the social perception of rurality in young university students.	COMPONENT				
		1	2	3	4	5
17.	Beekeeping is an activity that does not require science.	,766				
16.	Raising poultry, small and large livestock requires more experience than science.	,708				
19.	The classification, selection and improvement of seeds is based on several branches of natural sciences.	,653	,359			
13.	Soil management is based on a deep scientific knowledge.	,619				,315
14.	The irrigation system only needs to control water costs, but not the science.	,594			,333	
10.	Agro-ecosystem management requires a vast knowledge of science, but also of experience.	,524		,419		
12.	Sugarcane cultivation requires science as well.	,484		,310		,387
15.	Forest management, tree planting deployed without science	,483		,412		
1.	Rurality means unpopulated, quiet and peaceful place to rest		,793			
3.	Rurality means rustic place, lacking resources to work as well as to live.		,660			-,388
2.	Rurality means space of land destined to productive activity, the tillage of the land is the fundamental activity.		,621			
8.	Microelectronics is alien to farming life			-,744		
9.	Biotechnology is essential for agricultural life today.			,571		
11.	Garlic cultivation is a technology based on scientific knowledge.	,414		,497		

6.	The rural area is a space where traditional and popular culture is more relevant, but science, well applied, can ensure an adequate future.				,743	
5	Rurality is a space where traditional and popular culture take on greater relevance.				,650	
7.	Technology is the key axis of life in the countryside				-,310	,301
4.	Rural areas are less urbanized, with technical and productive infrastructure, which, if well managed, can generate progress and wellbeing					,820
18.	Pest and disease control has a strong scientific content for its management.	,380				,424
Source: Author						

The five main factors shown reflect:

A. *Scientific vision of rurality***.** An approach that highlights the role of technology linked to the agricultural economy. Composed of eight elements that distinguish essential components of the new rurality but that are not articulated with the new conception but rather with traditional modes and with a very economistic and pragmatic way of seeing the countryside, as was verified in the individual interviews.

B. *Archaic***-**Traditional approach to the rural. weight of the traditional conception, more positioned in reproducing the binary and dichotomous conception of modernity, articulated to the archaic, and the most traditional.

C. *New knowledge required from the agricultural culture***.** It shows the most relevant components of modern technologies linked to the agricultural economy.

D. *The countryside as a scenario in transition*: It takes up the traditional approach to the countryside, although showing a transition to the modern, especially linked to technologies. It combines elements of archaic conceptions far removed from the new rurality, with more relevant aspects.

E. *The countryside as an alternative for progress*. Although it is composed of only two elements, it is interesting to infer an appreciation that perceives rurality as an alternative for social progress.

A deep reading of the indicators that qualify the perceptions about rurality, technology, the countryside, show at the same time an ethic related to the attitudes towards this essential area of the economic life of Cuba as of the countries of the so called third world.

The results of the ANOVA analysis of one factor among subjects showed the symmetrical nature of the perception of rurality and the countryside, as well as of the technologies for the agricultural economy. The results of the four ANOVA runs, and the non-parametric test used to assess the influence of sex on these perceptions showed the following results:

A. The analysis of the scores in the perceptions of rurality achieved by university students by the 4 areas of sciences [Engineering (37), Social Sciences (33), Economic Sciences (21), and Natural Sciences, Sciences of Physical Culture and Sport (9)] in which the 10 careers involved in the study were grouped showed homogeneity (Levene's test (3-96) =2.258 p=0. 087), while the F-test showed no statistically significant differences (F (3-96) = 1.120 p=0.345, $\eta 2$ =0.03), verified even in the face of the disparity of the sampled groups (Welch (3 - 32,693) = 1.266 p=0.302). Neither did the post hoc multiple comparisons show differences since the Bonferroni test, as in the Gabriel (different sample sizes) and Games - Howell (for samples with unequal variances) tests, the non-existence of statistically significant differences $p<0.05$.

B. The scores achieved by university students regarding rurality, grouped into three large groups of nationalities of origin [Cubans (69), other Latin Americans and Caribbeans (23) and Afro-Asians (8)], (Levene's test (2 - 97) =2.621 p=0. 78), showed no statistical differences for the F-test (F (3-97) = 2.981 p=0.055 $\eta 2$ = 0.05), although they did for Welch (Welch (2 - 19.008) = 3.571 p=0.048). Post hoc multiple comparisons in the Bonferroni test showed no significant differences (p=0.052), while for the Gabriel test there are differences between Cuban students and other Caribbean and Latin American students (p=0.041), which was also verified with the Games-Howell test (p=0.025).

C. The comparison of the points acquired as a result of the questionnaire to measure the perception about rurality, the countryside and the agricultural economy in general, carried out in three groups considering in the sample studied the students who are in the first year of their higher education, (initial year of higher education) (24), those in the second and third year of higher education (students in intermediate courses) (46) and those in the final stages of higher

education, fourth and fifth year (students in final courses of higher education) (30), (Levene's test (2 - 97) = 1. 132 p= 0.327). The one factor ANOVA, showed no statistically significant differences between the three groups compared (F (2 - 97) = 1.295 p=0.279 $\eta 2$ = 0.02), (Welch (2 - 51,471) = 1.253 p= 0.294). the three tests performed as part of the post hoc, (Bonferroni, Gabriel and Games - Howell) also showed no significant differences between the groupings of students in higher education, $p<0.05$.

D. Finally, the comparison of the students' ages, gathered in three groups: students aged 18 to 20 years (34 students), those included in the interval 21 to 23 years (47 students), and students grouped from 24 to 27 years, (15 students) (Levene's test (2 - 97) = 0.912, p = 0.405). One-factor ANOVA, showed no significant differences F (2 - 97) = 1.251 p=0.291, $\eta 2$ = 0.03), which agreed with the results of the Welch test $p<0.05$. Multiple comparisons as part of the post hoc tests, verified in the three cases (Bonferroni, Gabriel and Games - Howell) the non-existence of significant differences $p<0.05$.

E. The comparison of the results of the rurality perception test with the gender variable was undertaken from the non-parametric Mann Whitney U test to show that there are no significant differences (X2 = 1144.0 p=0.473) and with a limited effect (Psest. 0.46).

In the worked sample, the perception of general rurality had a low rating or scores by 28%, medium rating or scores by 53%, while only 19% showed a high rating or scores.

The contributions of the agricultural economy to Cuba's gross domestic product (GDP) are essential, but its trends in the contributions given have been limited by a multiplicity of causes and internal and external factors, which has been reflected in the shortages of food products, with which it is understandable that in the social vision a crisis is distinguished in these areas of the national economy. These realities have a strong reflection in the young generations, becoming a nourishing source of negative criteria and perceptions regarding rurality

The analyses carried out in relation to activities in educational institutions showed that there are important deficits in the handling of agricultural development contents and the consequent presence of the agricultural economy or rurality in the context of general education processes. The weak presence of these contents in the curriculum of general education, including university education, is an irrefutable fact. These contents also present incoherencies at the level of the teachings themselves, in the different grades and levels as well as in the different subsystems of general education, and to these perspectives are added the absence of a critical perspective. The criteria of social economic progress in Cuba have never had a rational and coherent explanation at the level of the Cuban school curriculum. The interviews with specialists from the Ministries of Agriculture, Culture and Education, as well as with teachers from various subsystems and other students not included in the sample worked for the questionnaire, converge with these realities.

Particularly the specialists of Casas de Cultura show that the treatments of cultural policies for rural scenarios or framed in the agricultural economy, the referred policy is not approached distinguishing the particularities of these socio-productive and community scenarios involved in these spaces. This reality is also evident in the documents that concretely reflect the expressions with which the cultural policy is materialized in these scenarios.

The interviews with young adolescents from rural areas, some of them in the process of migrating to more urbanized areas, showed very relevant visions of life in the countryside, of rural life or of the agricultural economy in general. A synthesis of these approaches is presented below:

A. I worked in the countryside, with my family. The countryside is good to visit.

B. I like the countryside to raise produce, get money and go to the city.

C. I like the countryside because it gives me a chance to get money fast.

D. There are good options in the countryside, nowadays.

E. There are many contradictions for the agricultural producer

F. There is a lot of hard work in the fields

G. I have no clear idea of what to do in the future.

H. The field today does not offer me a secure future

I. I have several families in the countryside that do not inspire me to live in that environment.

J. I like the city better because I have more recreational options.

K. The opinions and criteria I express reflect more my personal experiences than what I learned in school.

The interviews with professionals and managers of the cultural and educational sectors, as well as with teachers directly linked to the agricultural economy, expressed essential ideas that are related to unfavorable perceptions of rurality, life in the countryside and the agricultural economy in general. Among others, the following were collected:

A. In recent decades, various complex transformations have been undertaken in the agricultural sector, many of which have not yet yielded significant results.

B. Many young people and professionals who enter the agricultural sector do not remain in it; they emigrate.

C. There are multiple failures in public policies that explain the inconsistencies in the productive and community scenarios most directly linked to the agricultural economy.

D. There are many potentialities and reserves to be activated for the deployment of the agrarian economy.

E. When cultural policies are concretized so that they materialize in agricultural economic scenarios, they are not solidly articulated with the more complex problems, goals or objectives identified in terms of the development and challenges of these scenarios.

F. Although it is common to speak of the environment as an element that cuts across social life, this is not done with the necessary rigor and coherence.

G. There are very good examples of how, by doing things well, one prospers and advances in the field, but it is difficult to generalize them.

H. At present, not all the conditions are really created to make activities in the agricultural sector more attractive to young people

I. Predatory agricultural practices have expanded, in the sense that they are done to obtain quick and easy money, but there has not been a strong dialogue with young people.

From what has been expressed, we can infer a vision of rurality centered on the countryside, very tied to traditional conceptions. They reflect deficits in education and cultural policies. The impacts of globalization and the cultural imposition generated from the urban environment determine the prevalence of predatory conceptions of the countryside as a means to obtain resources or temporary facilities, including money. Technologies and their potentialities are separated from the more coherent lifestyle and ways of life. The socio-cultural environment in rural areas is not conducive to more favorable perceptions of present and future processes. Educational institutions at all levels and scales, by ignoring essential contents of life, culture and the agrarian economy, determine culturales gaps that explain the negative perceptions of rurality.

DISCUSSION

The results achieved confirm the deep articulations of perceptions with realities and context (Diétima da Silva Bezerra et al., 2021), (Morales Chuco, 2017), although they also show certain inconsistencies and incongruities, articulated to the Cuban context, especially for youth groups, which are explained among other reasons, by failures in public policies. The trends of the global economy, the impacts of the market and communication technologies, with the deployment of consumerism, the processes of fetishization of life have definitely determined a change in rurality (Dirven, 2019) concurrent with displacements of young people towards more urbanized áreas (ÍñiguezRojas & Figueroa Fernández, 2018), as well as national and international migratory movements towards more developed regions and countries.

It should not be ignored that the countryside has lagged behind the urban world(Wineman et al., 2020), which is reflected in the quality of cultural and educational policies, promoting reproductive knowledge, subordinate, uncritical thinking(Albritton et al., 2017), and colonialist, where the deepening of the digital divide is distinguished(Rundel & Salemink, 2021), and the impacts of violence and drugs occur with more frequency and intensity, due to the convergence of a multiplicity of factors(Freitas et al., 2020), supported by poverty(Meij et al., 2020). At the same time, it should be noted that the processes of technology transfer are lagging behind, highlighting the subordination of the rural to the urban. The fact that the transformation industry of agricultural processes does not expand sufficiently, determines that rural areas remain basically as raw material supply scenarios (Kubeš & Chvojková, 2020). In these processes, the critical positioning of educational practices towards the rural context takes on special relevance, which weakens the ethic in the social perceptions constructed, disengaging human groups in behaviors with the imperatives of economic development.

These factors inhibit coherent perceptions in the studied youth segments, because even when the weight of science in the productive processes is distinguished (F1), the archaic vision of rural areas is not overcome (F2), the weight and role of science in the conformation of a new agricultural culture is not visualized (F3), even reaching the appreciation of the countryside as a scenario in transition (F4), which makes it possible to make reference to the articulation of rurality with progress (F5), but incongruities are evident in these perceptions that indicate criteria that are not mature with respect to the phenomenon being evaluated. Tourism linked to sustainable development is seen as an industry of the future closely linked to rurality, but it also depends on the policies that support it. This perspective is not always immediately visible, particularly in the perceptions of young Cubans at present.

The preference of university student youth groups in Cienfuegos for urban areas is a very marked trend in both developing and developed countries. The perceptions with low to medium scores towards rurality in its broadest sense, expressed by the young people interviewed, confirm a global trend of preference for the urban and the

need to build public policies that can subvert the deficits that are presented to make rurality more attractive to young people (Stockdale & Ferguson, 2020), seeking the multifunctionality of families, their jobs and income (Gautam & Andersen, 2016), implementing innovative and alternative technologies (Apostolopoulos et al., 2020). These perspectives are confirmed by European experiences (Feuerbach et al., 2019), (Wilson & Tonner, 2020), (Romito et al., 2012). The five identified factors distinguish a first vision of the role of science and technology, but from the cognitive prevail obsolete criteria, distant from the potential offered on the scale of progress, the new rurality. These youthful perceptions correspond to the vicissitudes of the agrarian economy, its inefficiencies and the complexities of public policies in their full realization in these scenarios, as well as to the failures of the educational systems in the curricular treatment of these contents which reveal eticities gaps.

CONCLUSIONS

The perception of young university students about the countryside, rurality and the agricultural economy in general is characterized by being limited, in that it does not strongly distinguish the modifications that are currently taking place in Cuba, in the world, nor the alternatives based on the technologies that are presented, even though the technologies that distinguish a good part of the changes in rurality in the present, in the study scenario itself, appear as the most relevant factor of those shown in the analyses.

In the Cuban case in particular, there is a correspondence between the limited perception of the countryside or the rural and the non-efficient and non-upward trajectory that characterized this segment of the national economy for decades. Secondly, the fact that, at the curricular level, within the university, there is no content articulated to rurality, the agricultural economy and its articulation with the progress and welfare of society and its individuals. This places the ethical imperative that higher education must critically and coherently enter into the context of rurality.

In the worked sample, the hypothesis is partially fulfilled insofar as the results of the F test resulting from the ANOVA of one factor between subjects, nor the post hoc multiple comparisons, provided statistically significant differences between the three age groups, students from 18 to 20 years old, those included in the interval 21 to 23 years old, nor in the students grouped from 24 to 27 years old. There were also no differences in the areas of science from which the careers analyzed came [Engineering, Social Sciences, Economic Sciences, and Natural Sciences], nor between genders. The mean perception of the values with which they identified the countryside and rurality was symmetrical for the groups and subgroups into which the sample studied was segmented. Statistically significant differences were only found in the perceptions of rurality among the groups of students grouped by nationality of origin [Cubans, other Latin Americans and Caribbeans, and Afro-Asians], the Welch test and the post hoc multiple comparisons (Gabriel and Games-Howell test) showed statistically significant differences with respect to the perception of rurality. The results achieved impose to deepen the theoretical perspective of the study, its reflection in the construct presented and to extend the sample both at university level and in other spaces, because as shown in the literature, the role of young people in rurality becomes essential for the future sustainability of development. The greater eticity in the perceptions of rurality must correspond to the demands of the development models that characterize the variations of rurality in Cuba and in the world.

BIBLIOGRAPHICAL REFERENCES

Apostolopoulos, N., Chalvatzis, K. J., Liargovas, P. G., Newbery, R., & Rokou, E. (2020). The role of the expert knowledge broker in rural development: Renewable energy funding decisions in Greece. ***Journal of Rural Studies***, ***78***, 96-106.

Boessio, A. T., & Doula, S. M. (2016). Jovens rurais e influências institucionais para a permanência no campo: Um estudo de caso em uma cooperativa agropecuária do Triângulo Mineiro. ***Interações (Campo Grande)***.

Diétima da Silva Bezerra, F., Alves do Nascimento2, C., & Gori Maia, A. (2021). Rural development and the expansion of non-agricultural activities in the Brazilian Amazon. ***Revista de Economia e Sociologia Rural***, 59(4).

Dirven, M. (2019). ***Nueva definición de lo rural en América Latina y el Caribe en el marco de FAO para una reflexión colectiva para definir líneas de acción para llegar al 2030 con un ámbito rural distinto. 2030—Alimentación, agricultura y desarrollo rural en América Latina y el Caribe,*** FAO, Santiago de Chile.

Feuerbach, F., Kosinski, J., & Schmidt, A. (2019). ***Studie zum Thema „Was macht den ländlichen Raum für junge Fachkräfte attraktiv?. Literaturanalyse für das Programm Perspektive Land***. Im Auftrag der Deutschen Kinder- und Jugendstiftung (DKJS).

Freitas, N. T., Monego, G. M., & Cezar, M. M. (2020). Juventude e neoruralidade: Compreendendo subjetividades nesse espaço. ***Anais do Salão Internacional de Ensino, Pesquisa e Extensão***, ***12***(2).

Gautam, Y., & Andersen, P. (2016). Rural livelihood diversification and household well-being: Insights from Humla, Nepal. ***Journal of Rural Studies***, ***44***, 239-249.

Hernández Sampieri, R., Fernández Collado, C., & Baptista Lucio, P. (2014). ***Metodología de la Investigación.*** (Sexta Edición.). Mc Graw Hill Interamericana.

ÍñiguezRojas, L., & Figueroa Fernández, E. (2018). Los territorios rurales en cuba. Las disyuntivas de su determinación. ***En Cuba rural. Transformaciones agrarias. Dinámicas sociales e innovación social*** (Instituto Cubano del Libro, pp. 105-135). Editorial de Ciencias Sociales.

Kubeš, J., & Chvojková, A. (2020). Back to peripheries based on remoteness. Human capital in the peripheral municipalities of South Bohemia. ***Journal of Rural Studies***, ***79***, 116-124.

López-Aguado, M., & Gutiérrez-Provecho, L. (2019). Cómo realizar e interpretar un análisis factorial exploratorio utilizando SPSS. ***REIRE Revista d'Innovació i Recerca en Educació. Universidad de Barcelona, España.***, ***12***(2), 1-14.

Meij, E., Haartsen, T., & Meijering, L. (2020). Enduring rural poverty: Stigma, class practices and social networks in a town in the Groninger Veenkoloniën. ***Journal of Rural Studies***, ***79***, 226-234.

Morales Chuco, E. (2017). ***Marginación y juventud en Cuba: Análisis desde la psicología social***. Ciencias Sociales.

Romito, G., Savarese, E., Festuccia, A., Peta, E. A., & Ventura, F. (2012). ***Young people perception of rural areas. A European survey carried out in eight Member States*** (Progetto realizzato con il contributo FEASR (Fondo europeo per l'agricoltura e lo sviluppo rurale) nell'ambito delle attività previste dal programma Rete Rurale Nazionale 2007-2013). Document drawn up under the National Rural Network activities – Working Groups: Youth – MiPAAF – DISR.

Rundel, C., & Salemink, K. (2021). Bridging Digital Inequalities in Rural Schools in Germany: A Geographical Lottery? ***Education Sciences***, ***11***.

Stockdale, A., & Ferguson, S. (2020). Planning to stay in the countryside: The insider-advantages of young adults from farm families. ***Journal of Rural Studies***, ***78***, 364-371.

Strijker, D., Bosworth, G., & Bouter, G. (2020). Research methods in rural studies: Qualitative, quantitative and mixed methods. ***Journal of Rural Studies***, ***78***, 262-270.

Troian, A., & Breitenbach, R. (2018). Jovens e juventudes em estudos rurais do Brasil. ***Interações (Campo Grande)***, ***19***, 789-802.

Wilson, J., & Tonner, A. (2020). Doing family: The constructed meanings of family in family farms. ***Journal of Rural Studies***, ***78***, 245-253.

Wineman, A., Alia, D. Y., & Anderson, C. L. (2020). Definitions of "rural" and "urban" and understandings of economic transformation: Evidence from Tanzania. ***Journal of Rural Studies***, ***79***, 254-268.