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## **The first National Atlas of Cuba: Rediscovering the early 20<sup>th</sup> century country.**

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### **ABSTRACT**

In 1949 was published the first National Atlas of Cuba (“Atlas de Cuba”) in the Institute of Geographical Exploration at Harvard University. This atlas was edited by a Cuban geographer and cartographer, Gerardo Canet, counting with the valuable collaboration of Erwin Raisz, a Hungarian-born cartographer graduated at the Royal Polytechnicum of Budapest.

Using Canet’s words in the Introduction the atlas is “a living picture of Cuban Geography as far as possible in 64 pages”. A total of 34 themes were represented by maps and graphics, presenting the history of the country, its’ physical geographical characteristics, the more important parameters to describe the society (standard of living, health, social composition, government, etc) and the national economy.

A very special characteristic of this national atlas is the rich combination of maps with pictures, charts and text. Leafing through its pages we can see that the authors not only wanted to create an atlas for scientists and specialists in the different topics represented on the maps: their intention was to make all this information available and easily understandable for the public in general. The atlas can be considered the early multimedia result of joining two peculiar cartographic styles: the delicacy of the drawing ability of Erwin Raisz and Canet’s interest to represent the broader spectrum of data using all the graphic tools at their disposal to make the atlas more interesting and attractive. This little masterpiece constitutes an intentionally ignored gem of the Cuban cartography of mid-twentieth century.

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*Optional:* List of suggested illustrations (maximum 10)

***PROPOSED BY THE AUTHOR AS POSTER PRESENTATION***

# **THE FIRST NATIONAL ATLAS OF CUBA: REDISCOVERING THE EARLY 20<sup>TH</sup> CENTURY COUNTRY**

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The first National Atlas of Cuba (“Atlas de Cuba”) was published in 1949 by the Institute of Geographical Exploration at Harvard University. This atlas was edited by a Cuban geographer and cartographer, Gerardo Canet, counting with the valuable collaboration of Erwin Raisz, a Hungarian-born cartographer graduated at the Royal Polytechnicum of Budapest.

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A special characteristic of this national atlas is the rich combination of maps with pictures, charts and text. Leafing through its pages we can see that the authors not only wanted to create an atlas for scientists and specialists with the different topics represented in the maps: their intention was to make all this information available and easily understandable for the public in general. The atlas can be considered the early multimedia result of joining two peculiar cartographic styles: the delicacy of the drawing ability of Erwin Raisz and Canet’s interest to represent the broader spectrum of data using all the graphic tools at their disposal to make the atlas more interesting and attractive. This little masterpiece constitutes an intentionally ignored gem of the Cuban cartography of the mid-twentieth century.

## **1. INTRODUCTION: ANTECEDENTS AND AUTHORS OF THE ATLAS**

The publication of „Atlas de Cuba” is closely related to one of the most recognized cartographers in the 20th century: Erwin Josephus Raisz (1893-1968). He was born in 1893 in the city of Levoča (Hungarian name: Lőcse, now in actually Slovakia) of the former Austro-Hungarian Monarchy and obtained a degree in Civil Engineering and Architecture at the Royal Polytechnicum (Magyar Királyi József Műegyetem) in Budapest in 1914 (Karsay, 2009).



**Fig 1** Erwin Josephus Raisz (Source: Garver, 1999)

In 1923, he emigrated to the United States and began to work simultaneously for the Ohman Map Company and Columbia University in New York. At this university, he was the first professor to organize and teach a course in Cartography, which at same time was one of the first such courses in the country (Anon., 2012). In 1929, he obtained his Ph.D. in Geology, presenting a dissertation entitled „Scenery of Mount Desert Island: its origin and development”, which can be considered the first research work related to the creation and posterior development of his physiographic method for the representation of landforms.

In this period, a Cuban geographer, Salvador Massip (founder of the Department of Geography at the University of Havana in 1927) worked with Raisz on the creation of a physical map of Cuba using the physiographic method. In 1931, Raisz wrote in his pioneer article entitled "The physiographic method of representing scenery on maps" (Geographical Review):

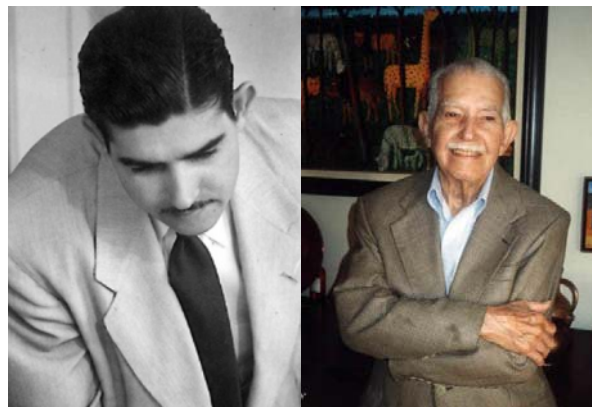
"The lack of detailed physiographic maps from which information can be taken is a more serious question. Very little has yet been done in this field. The United States and Europe have been worked out by Professor A. K. Lobeck. For Asia we expect soon to have the map of Professor F. K. Morris. New Zealand has been worked out by C. A. Cotton (not yet published), and Cuba by the author (E. J. Raisz: Diagrama fisiográfico de Cuba, Havana 1929)..." (Raisz, 1931: 304)

Based on his words, the map of Cuba published in 1929 is one of the first maps (or the first one) entirely worked out by Erwin Raisz using his physiographic method (Figure 2), constituting the starting point of a 30-year long professional relationship with Cuban geographers.



**Fig 2** Diagrama fisiográfico de Cuba by Raisz and Massip (New York, 1929)

After this first contact with the Cuban Geography, Raisz followed his teaching and research activities in the Institute of Geographical Exploration at Harvard University from 1931. Some years later, a young Cuban geographer, Gerardo Canet (1911-?) arrived at Harvard as a lecturer in the Department of Cartography of the Institute of Geographic Explorations (Figure 3).



**Fig 3** Gerardo Canet in the late 1940's (left) and at the beginning the 21<sup>th</sup> century (right) (Sources: Journal of Crustacean Biology, 2010 and University of Miami Libraries, 2012)

Following Salvador Massip's recommendation, he also studied Cartography under the direction of Erwin Raisz. The outstanding result of these years at Harvard is the "Atlas de Cuba" (Atlas of Cuba), published in 1949 and considered by the international cartographic community as the first national atlas of the country (National Széchenyi Library, 2002).

After publishing the atlas, Canet returned to Cuba to follow teaching at the Víbora Institute in Havana. He can be considered one of the most active Cuban geographers in the decade of 1950's, being recognized his meritorious cartographic and geographic activities by the national and regional scientific community. Canet's influence overran Geography and made maps that were published in works of other scientific fields as History and Biology. In the style of his maps we can notice the presence of Erwin Raisz, using often the physiographic method to represent the relief. He specialized in the surveying and developing of Cuba's natural resources, becoming the national delegate in the Commission of Cartography of the Pan American Institute of Geography and History (member institution of the Organization of American States, OEA), and President of the Pan American Committee of Charts and Special Maps of the mentioned institute.

From 1954, Canet and his wife opposed to the dictatorship of Fulgencio Batista and in 1959 supported the change promoted by the Revolution led by Fidel Castro. Canet was named Vice-President of the Bank for the Agricultural and Industrial Development of Cuba. However, during 1960 he and his wife (Isabel Pérez Farfante de Canet, biologist, who was Full Professor at Havana University and Director of the Fisheries Research Center of Cuba) began to have conflicts and discussions with the new government, leaving definitively the country and emigrating to the USA in 1961 (Bauer, 2010).

## 2. GENERAL CHARACTERISTICS OF ATLAS DE CUBA

The publication of Atlas de Cuba was the result of a 5-year stay in the Institute of Geographical Exploration at Harvard University (Figure 4). In the Introduction of the atlas, Canet made special mention of his professor Salvador Massip: "The inspiration was provided by the distinguished Cuban geographer, Professor Salvador Massip, with whom the idea for such an atlas originated and on whose advice the author went to Harvard University to complete his cartographic studies and to undertake the project" (Canet and Raisz 1949: 3).



**Fig 4** Front cover of Atlas de Cuba (fragment, Canet and Raisz, 1949)

In the Introduction, Canet also mentioned the John Simon Guggenheim Memorial Foundation and their fellowship, a financial support that made his research possible at Harvard. He did not forget to thank “the close collaboration with the well-known cartographer, Dr. Erwin Raisz, at Institute of Geographical Exploration” (Canet and Raisz 1949: 3).

A total of 34 themes were presented in the atlas , which can be structured into five main groups (excluding Index and Bibliography):

1. Introduction: Cuba, center of the Americas; The world around Cuba
  2. History: Discovery, conquest and colonization; Colonial Cuba; Revolutionary Cuba
  3. Physical Geography: Climate; Hurricanes; Magnetism, gravity and earthquakes; Oceanography; Geology; Geomorphology; Soils; Forestry; Fisheries; Vegetation
  4. Society: Population; Standard of living; Health; Social composition; Government; Tourist trade; Education
  5. Economy: Agriculture; Sugar; Minerals; Tobacco; Coffee; Winter vegetables; Fruits; Other crops; Livestock; Industries; Communications; Import and Export
- Annex: Colored map of Cuba

Their aims creating this atlas are described in detail in the first sentences of the Introduction: “This Atlas is more than an attempt to describe Cuba. Our aim is not only to present the setting in which the drama of Cuban life is played but to show how his life itself changes its own setting, creating new problems and new adjustments to them. This dynamic element is usually absent from the impersonal atlases produced by governments, societies and publishing houses, which merely give a graphic report of a given moment of time.” (Canet and Raisz 1949: 3)

Raisz and Canet made a map of Cuba especially for the atlas (Mapa de paisajes de Cuba). This map was catalogued by Canet as “a new experiment in cartography” (Canet and Raisz 1949: 3), using colors to make difference between land types (cultivated fields, mountains, valleys, etc), and completing them with the use of symbols. As an exceptional support to the making of the atlas, the Cuban Navy organized a series of flights over Cuba for Canet and Raisz, giving them an exclusive opportunity to check “on field” the results of the preliminary analysis of color photographs taken from the air. The size of the resulting map was 24 x 60 inches, being distributed as an annex of the printed atlas.

### **3. THE MAPS OF THE ATLAS**

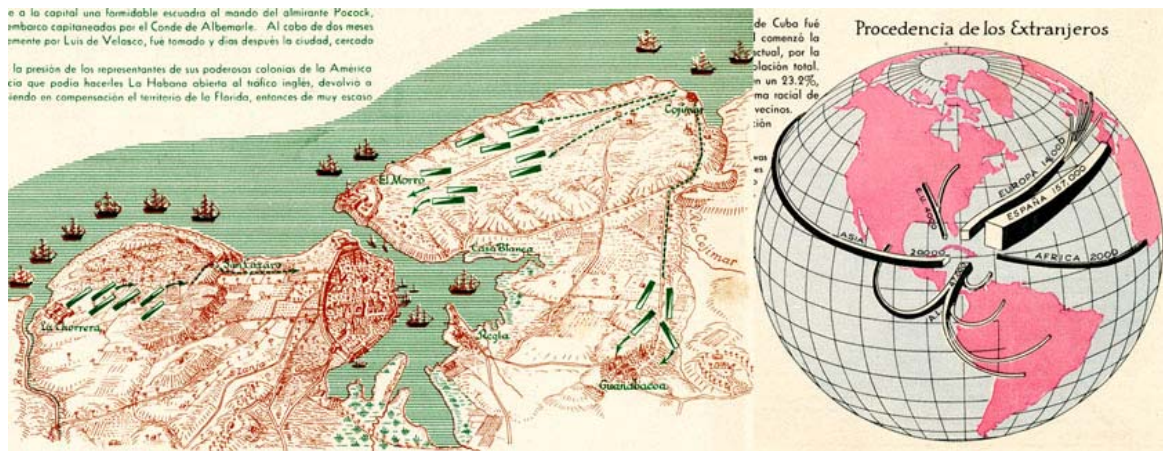
Seventy maps can be found in the 64 pages of the atlas (excluding the annexed map of Cuba). The number of maps by theme is as follows in descending order:

- 14 maps (1 theme): Climate
- 6 maps (2 themes): Hurricanes; Magnetism, gravity and earthquakes
- 5 maps (1 theme): Discovery, conquest and colonization
- 3 maps (4 themes): Colonial Cuba; Revolutionary Cuba; Population; Communications
- 2 maps (3 themes): Tobacco; Other crops; Imports and exports

The remaining 23 themes included only one map each. They were drawn with an approximated scale between 1: 5 900 000 and 1: 2 220 000. In the theme entitled “Standard of living” they used a map at scale approximated to 1: 2 000 000, but the Western and Eastern ends of the island were left out of the page. The scale of the maps was calculated according to the graphic scales given in 21 of the 70 maps.

The majority of maps, a total of 64 were printed using only two colors, while 6 maps and the annex were printed in full colour. 59 maps represented only the Cuban territory: the island of Cuba, island of Pinos and the major adjacent archipelagos formed by small islands. Moreover six

regional maps (representing the Caribbean area), two maps representing the Western hemisphere on a globe (America), two world maps and one map of Havana and surroundings can also be found in the atlas (Figure 5).



**Fig 5** Examples of maps: Havana and surroundings (left, Canet and Raisz 1949: 9, Colonial Cuba) and Immigration (right, Canet and Raisz 1949: 35, Social Composition)

#### 4. GRAPHIC SOLUTIONS REPRESENTING STATISTICAL DATA

A special characteristic of this national atlas is the rich combination of maps with pictures, charts and text. The explanative texts in each of the chapters (themes) were written in Spanish and English to make the information more accessible for a broader number of specialists and interested people. The reader can find an interesting combination of graphical and innovative methods to represent data. The use of these solutions is not casual: the authors intended to create an atlas that can be used not only by the scientific community, but by the general public too, being their premise to make easily understandable the information represented with maps and graphics. This main aim is also explained in detail by Canet and Raisz in the Introduction (Canet and Raisz 1949: 3):

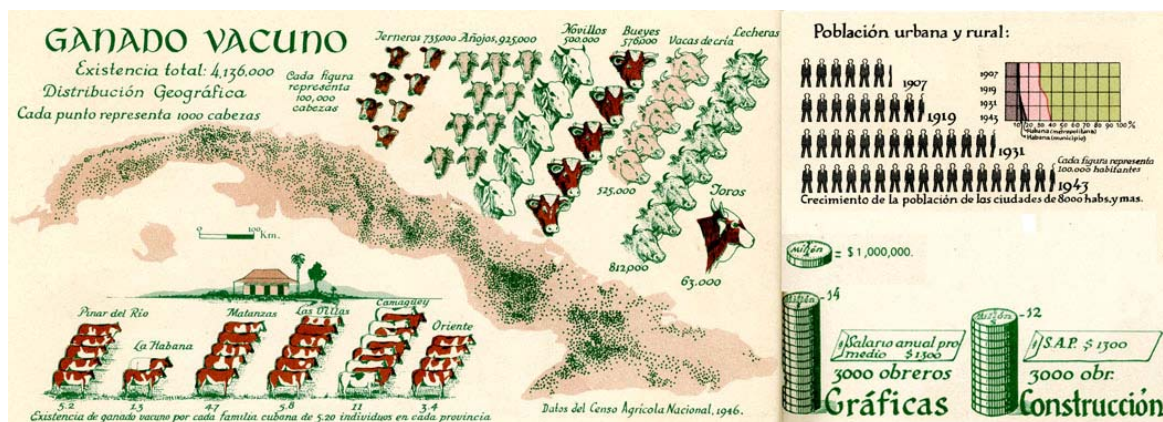
“We have presented the results of our labor in graphical form. An old Chinese proverb says: ‘A picture says more than a thousand words’. Moreover by visual representation the most complicated problems may be brought within the understanding of the layman. Everyone should know the geography of his own country, and in the case of Cuba this need is imperative, since few countries have such clear-cut dependence on location, climate and soil. Cuba’s internal problems of adjustment and interdependence with the rest of the world demand a high degree of understanding from its citizens.”

At the outset, on page 5 can be found an easy and original solution to make sense of the approximated distances between Cuba (drawn in the center point of the world map made using an azimuthal orthographic projection) and other regions of the world (Figure 6).



**Fig 6** The World around Cuba (Canet and Raisz 1949: 5)

Flipping through the pages of the atlas, a specialist can discover the remarkable influence exerted on authors by the Isotype based visual school created by Otto Neurath in Vienna, Austria. This graphic method of visualization became very popular in the first half of 20<sup>th</sup> century. In this specific case, it was exploited to the maximum as can be seen in Figure 7.



**Fig 7** Examples of the use of isotypes combined with maps (Canet and Raisz 1949: 20, 24,26)

Other characteristic to be mentioned apart is that the authors avoided the use of charts on maps. Instead of charts (that were used only on one map), they preferred to use dot maps (in three cases, see Figure 7) and flow maps (in four cases).

In practice, the statistical data were represented placing simplified charts and isotype-based graphics around the maps, which together with the bilingual text let users get a full idea about the presented themes. Very often, the charts (diagrams) were completed with illustrations related to the specific data (Figure 8).

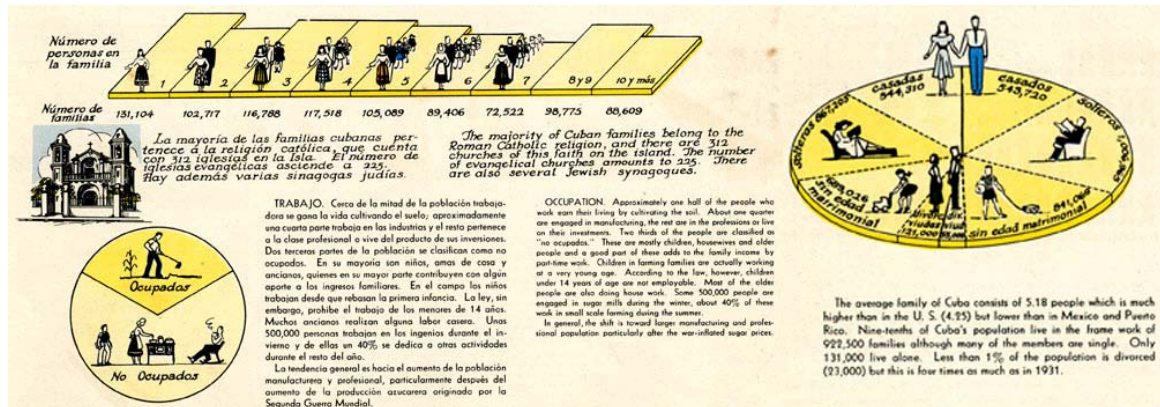


Fig 8 Examples of the use of illustrated charts (Canet and Raisz 1949: 9)

Resuming this brief presentation of the atlas, I can affirm that it can be named as an “early multimedia” result of joining two peculiar cartographic styles: the personal style and delicacy of the drawing ability of Erwin Raisz and Canet’s interest to represent the broader spectrum of data using all the graphic tools at their disposal.

## 5. NATIONAL ATLAS OR NOT?

Actual Cuban critics of the atlas affirm that this work cannot be considered a national atlas: “The first atlas published in Cuba that we know, but not being really a national atlas – mainly because of its modest presentation and represents the efforts of an isolated author in an adverse environment from the point of view of scientific work –, is the atlas published by the Cuban geographer Gerardo Canet in 1949.” (Domech 2001: 5)

Before reacting to this opinion given by the President of the Cuban Association of Geography beginning the 21<sup>st</sup> century, I would cite three widely accepted definitions of national atlases:

- Encyclopedic Dictionary of Cartography in 25 languages: “An Atlas which depicts different aspects of one country”. (Neumann 1997: 471)
- Konstantin Salishchev (Russian geographer and cartographer, 1960): “A national atlas is a multiobjective basic atlas of a country in particular, which contains a summarized representation of contemporary scientific knowledge of the country in the field of Physical Geography, Economics and Politics. It is usually an official publication, or at least sponsored by the government and includes all the wealth of information available about the territory.” (Domech 2001)
- Erwin Raisz: “Atlases that usually contain, besides the topographical pages, a rich assortment of special maps that almost all informative or statistical data concerning the country can be conveniently obtained.” (Raisz 1948: 217)

Any of the cited definitions made mention and the least fixed a range of number of pages or the level of printing quality as a condition to consider an atlas national or not. By this reason, the “modest presentation” cannot be a serious argument to consider. The second argument is that the atlas was the result of the efforts of only one specialist “in an adverse environment”, which is refuted by Canet in the Introduction writing his thanks to all the entities, personalities and colleagues that made possible the publication of the atlas. Salishchev’s definition is the only one to put as condition the sponsorship by a government. Canet’s work was not sponsored directly by the then government, but his research counted with the collaboration of personalities and institutions of the government and the Cuban scientific community. In the Introduction we can read his thanks “to specifically His Excellency, the President of the Republic”, followed by a list of names, and to “the Cuban Navy, which... provided the facilities for an aerial reconnaissance of



the Island” (Canet and Raisz 1949: 3). On the other hand, he also made mention of those national atlases produced by government institutions “impersonal atlases... which merely give a graphic report of a given moment of time” (Canet and Raisz 1949: 3). Based on these words it can be deduced that Canet made the atlas just during his fellowship in Harvard to ensure his personal capacity of decision in the editing works, but the collection of the data represented on the maps only could have been successful if he also counted with the collaboration of government and private scientific institutions.

In 1962 – eight years before the publication of a new National Atlas of Cuba in collaboration with the Soviet Union, considered by the revolutionary government as the first National Atlas of the country –, Raisz also made mention of the atlas, referring to the publication of national atlases all around the world: “Almost every country of Europe, in addition to Mexico, the Central American republics, **Cuba**, Brazil, Argentina, the French colonies, Morocco, Tunis, the Congo, Egypt, India, Japan, China, Australia, Tanganyika, Ghana, etc published such atlases.” (Raisz, 1962: 101)

## **6. REDISCOVERING CUBA ACROSS THE ATLAS**

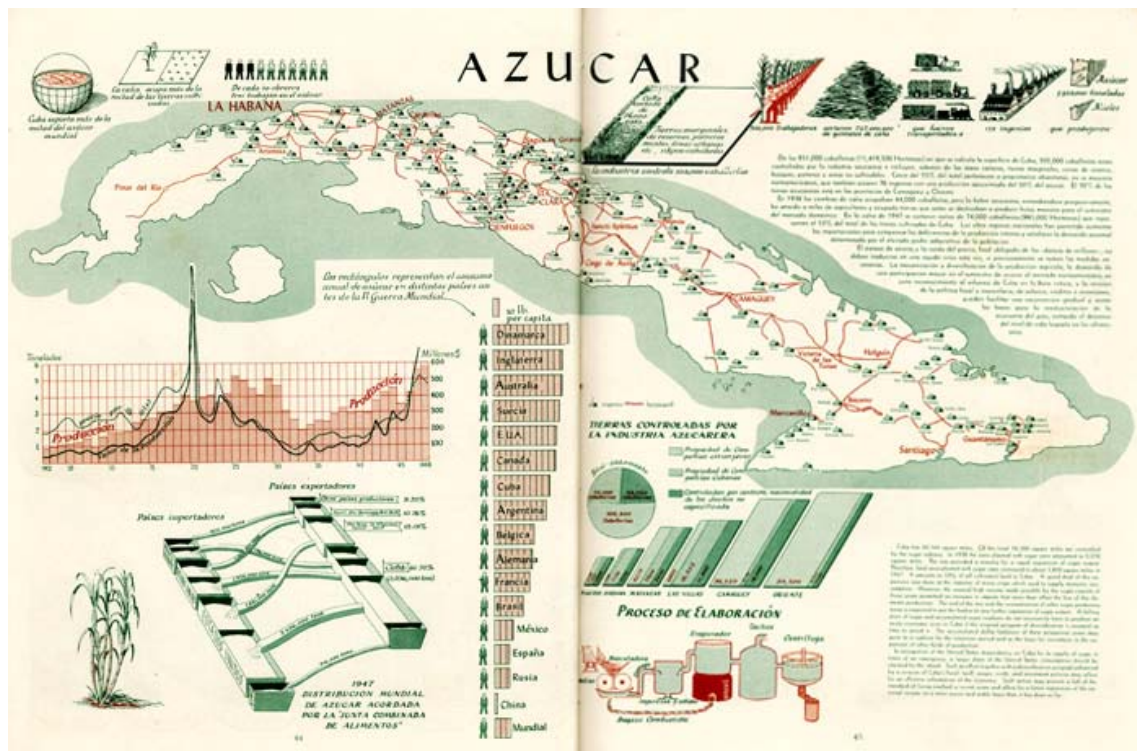
Why to say that we can rediscover Cuba reading this atlas?

After its publication, the atlas became an important and inevitable source of consultation for specialists developing any research on topics related to Cuba. Cuban scientists began to use it systematically, and some of them asked Gerardo Canet to collaborate with them in the edition of books in different fields. Canet made the maps for one of the most popular textbooks in the 1950's, entitled “Geography of Cuba” and written by Leví Marrero (Cuban geographer, PhD in Jurisprudence and Arts at Havana University, Geography and Economic History Professor). His professional activity was also recognized over Geography and in 1950 a famous Cuban historian, Ramiro Guerra asked him to draw a set of maps for the book entitled “Guerra de los 10 Años” (The 10 Year's War), about the first Independence War against Spain in the 19<sup>th</sup> century. These are only two examples among many others that demonstrated the impact of Canet's work on the Cuban scientific society.

This modest masterpiece of Cuban Cartography began to be intentionally ignored after Canet left the country in 1961. Raymond T. Bauer (2010, pp. 346) described this crucial moment of Canet's life in the Obituary dedicated to the memory of his wife, Isabel Pérez Farfante de Canet: “...Isa and Gerardo's names appeared on a secret government blacklist (revealed to them by a friend in the government), which meant that their days in Cuba were numbered... They sent their two young sons to the United States on a pretext and then, a month later, went to the airport without reservations, bought a ticket, and flew to the U. S. They carried with them only a single suitcase, leaving home, possessions, and their careers in Cuba behind.”

His desertion was not forgiven by the Cuban government and from that moment his scientific works were sentenced to a kind of ostracism for both scientific and general public, an ostracism practiced usually by the government with all those personalities that did not follow the official “doctrine”. I do not use the word “forbidden” intentionally, because as far as I know Canet and his works were never officially forbidden: they were and are just intentionally ignored and omitted. The generations born after 1959 have no knowledge of his scientific merits, because there is not any kind of diffusion in the national media controlled entirely by the government. His works (including Atlas of Cuba) gather dust on the shelves of the National Library, because only Cuban researchers authorized by government entities (or foreign researchers subscribed to the Library) can have access to them. His name can be found sporadically in some scientific articles written in Cuba after his desertion, but the authors limited themselves to make mention of his work without any more detailed explanation, or in some cases to express a kind of underhand negative criticism. During the last 12 years few works have been made in Cuba, which used correctly some data from Atlas de Cuba as an introduction to the main theme or to make comparisons between data from

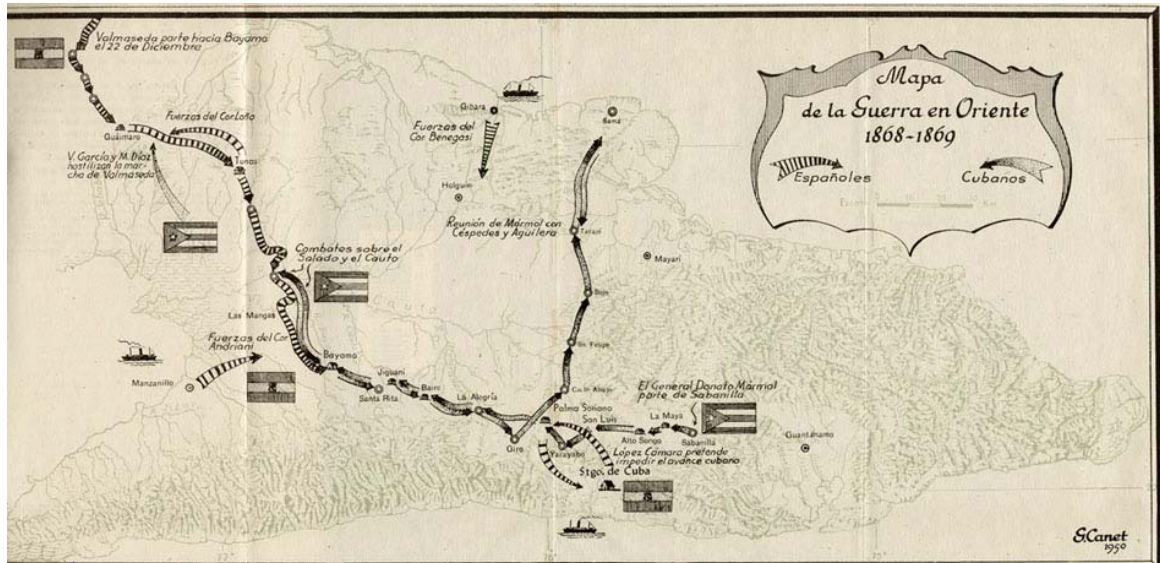
different periods, e.g. an MSc thesis written in the Faculty of Economy of the University of Havana in 2007 (Pérez, 2007) and a paper about the Cuban-Mexican relations presented in Guadalajara in 2002 (Rodríguez, 2002).



**Fig 9** Pages of the atlas dedicated to the production of sugar (Canet, 1949: 15-16)

The data represented in the atlas is another cause of the ostracism suffered by Canet, because his data provide a fairly complete picture of Cuba before 1959. Whoever has the opportunity to get their hands on this atlas, gains access to a range of information that the official press has avoided to mention in the last more than 50 years (Figure 9). Maps and graphics of the atlas are a trip to a Cuba declared “totally obsolete” – at its most negative sense – by the post-1959 government, but drawn by Canet with all its’ positive and negative tones. This is the reason why the title of this article was completed with the affirmation “Rediscovering the early 20<sup>th</sup> century country”. I also could have written rediscovering the early 20<sup>th</sup> century Cuban cartography, because the premeditated exclusion of the atlas was (and is) accompanied by the intentional disregard of other scientific works that counted with the collaboration of Canet. A rare exception is the new edition of the book entitled “Guerra de los 10 Años” (The 10 Year's War) dated from 1972. This includes four maps made by Canet in 1950 (Figure 10) and the thanks expressed by the author, Historian Ramiro Guerra: “who also expresses its gratitude to Dr. Gerardo Canet, who has given a collaboration of the highest value with the admirable work done by him in the making of the four maps specially designed for this book, such as excellent as all of his ‘Atlas de Cuba’” (Guerra, 1950).

With this paper I would like to modestly contribute to giving a more complete idea of the development and achievements of the Cuban Cartography and Geography in the first half of the 20<sup>th</sup> century. I will consider that this aim was achieved at least in part if this work constitutes the starting point for further research on this topic.



**Fig 10** One of the maps made by Canet for the “Guerra de los 10 Años” book (Guerra, 1950)

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## **BIOGRAPHY**

José Jesús Reyes Nunez is Associate Professor at Eötvös Loránd University in Budapest, Hungary. His research interests lie in Cartography for Children (teaching of cartographic concepts for children in Elementary and High Schools as well as the use of thematic cartography in the teaching activities), Computer Cartography (including GIS and the use of Web to teach cartographic concepts for children) and Cartography of Mesoamerican Cultures.

He has presented lectures in universities in Argentina (2004 and 2008), Brazil (2011), Bulgaria (2006), Portugal (2008) and Spain (2009, 2011 and 2012). Author of more than 20 articles in scientific journals and more than 45 papers in conferences and other events, he has also collaborated as cartographer in the publication of more than 45 textbooks, atlases, etc. In the past six years has led and participated in research projects with Argentine (2004 and 2008) and Austrian specialists (2010).

From 1995 participates in the activities programmed by the Commission on Cartography and Children of the International Cartographic Association (ICA), being elected as Commission Vice-Chair in the period 2003-2007, Co-Chair between 2007 and 2011 and Chair from 2011. He is responsible for the organization of the Barbara Petchenik Map Competition in Hungary from 1999, and was named President of the International Jury in 2005 and 2007.