

Marco van Egmond*

A new online historical atlas: the Dutch Bosatlas digitized and annotated (1877-1939)¹

Keywords: School atlases; digitizing; annotations; Dutch cartography; educational cartography; visualization techniques.

Summary: By far the most important school atlas of the Netherlands is De Bosatlas, named after its first editor Pieter Roelf Bos (1847-1902). This atlas first appeared in 1877, and until now 55 editions are published. In co-operation with the publishing company Noordhoff and Amsterdam University Library, Utrecht University Library recently digitized all 36 prewar editions of De Bosatlas, offering online access to them.

In a digital exhibition (<http://bc.library.uu.nl/bos-atlases-mapping-world-1877-1939>) each edition is accompanied by a scientific commentary, describing the historical context and the differences with its predecessor. In this way the users of the website – primarily high school pupils – will find out the way the Dutch in general and the atlas editors in particular viewed the world in the past, as well as the changes in those views and attitudes as reflected in the maps and in the structure of the atlas. As such, a new online historical atlas has come into being, allowing users to see the changes in our knowledge of the world, as the results of marine and terrestrial exploration, and to grasp the changes in the world itself due to urbanization, armed conflicts, and constructions of infrastructure.

To facilitate comparing the different editions of De Bosatlas, a special viewer was developed. With this viewer the monitor screen is subdivided, having two map images from subsequent editions side by side. Simultaneously zooming is possible, and a commentary clarifies the changes between the maps. Furthermore users can intuitively browse through multiple editions of De Bosatlas as well.

The paper will shed light on the specific development of De Bosatlas, the online presentation of the digitized editions, and the usability of the digital exhibition of atlas editions and especially the synchronized viewer. Potential future functionality will also be dealt with.

Introduction

The highest point in the Netherlands? Mount Ubachs (‘Ubachsberg’) in the Dutch province of Limburg according to the first edition of De Bosatlas from 1877. In the next edition of this Dutch school atlas the same mountain, which was then thought to be 240 metres high, was renamed Mount Krikelen (‘Krikelenberg’). For lack of accurate levelling Mount Krikelen would take the credit for a long time. Only in the 12th edition from 1896 Mount Vaals (‘Vaalsberg’) appeared in De Bosatlas, formerly estimated 200 metres high, now measuring over 300 metres (Fig. 1)!

* Curator of maps, atlases & printed; Utrecht University Library

¹ Translation by Conny van Bezu, Utrecht University Library



Figure 1.: The highest point in the Netherlands in the second edition of De Bosatlas from 1879, with Mount Krikelen ('Krikelenberg') as the highest point, and the twelfth edition from 1896, with Mount Vaals ('Vaals') as highest point (Amsterdam UB, I 7 C2 (map 3) and I 7 C12 (map 10)).

This example of the highest point in the Netherlands is typical for the way in which the several editors of De Bosatlas acted in the course of time: they tried to keep in touch with current affairs and adjusted the map imagery if necessary. In addition they changed the representation of the world by applying new techniques and views in the field of visualization or by specific interpretations of geographical changes. Now we have a splendid chance to follow these kinds of developments having taken place between 1877 and 1939, because Utrecht University Library has digitized all prewar editions of De Bosatlas and has made them available on the internet.

The year 2017 sees the 140th anniversary of the first edition of the famous Bosatlas (Fig. 2). Nothing indicated that the Schoolatlas der geheele aarde ('School atlas of the entire earth') as the atlas was then called would grow into the instructional atlas of the Netherlands. Editor Pieter Roelf Bos (1847-1902, Fig. 3) had to compete against as many as twelve atlases in those days!² As far as arrangement and subject matter were concerned the atlas was not innovative at all and followed the example of German atlases. Also the map material initially proved to have its flaws: the 64 maps on the 27 map leaves of the first edition are partly black and white and partly coloured, have no legends and are not always based on the most recent sources. Nevertheless the atlas turned out to fill an obvious educational gap and soon the editions, by now characterized by permanent innovation, followed each other in quick succession. Already in 1891 the tenth edition was published, the twentieth appeared in 1912 and the thirtieth in 1925. Now we have the 55th edition, which came on the market at the end of 2016 and was followed in 2017 by a matching electronic version. In other words: it is impossible to imagine education today without De Bosatlas, a household name in the Netherlands!³

² Ormeling (2005): 8 en 9.

³ Vroege (2015).

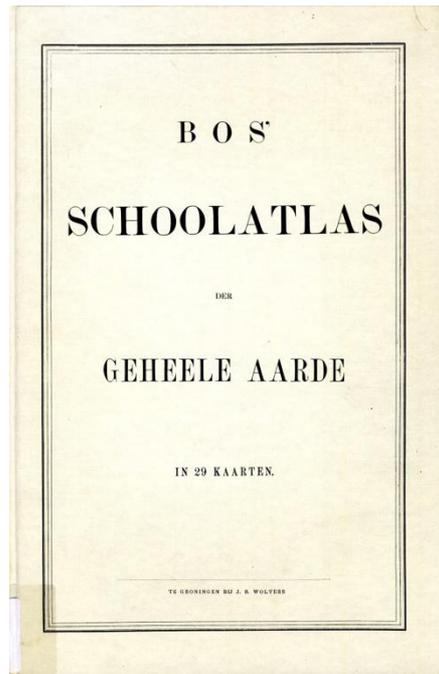


Figure 2: The very first edition of De Bosatlas from 1877 which was then known under the name Schoolatlas der geheele aarde ('School atlas of the entire earth').



Figure 3: Portrait of Pieter Roelf Bos (1847-1902) when he was about fifty years old. The portrait was inserted in the 31st edition of De Bosatlas from 1927, on the occasion of the fiftieth anniversary of the atlas.

Against the backdrop of a changing society

So there is every reason to bring De Bosatlas into the limelight, to be more specific the digital limelight. Because of its 140th anniversary and because of the large number of editions in its collection the University Library got the idea in 2016 to digitize all prewar editions and put them online. Scholarly explanations would be included, and each separate edition would be put in a historical context. Next the editorial changes for each map, for instance adjustments to the

visualization, the additions of toponyms, border corrections, should be explained from edition to edition. After all, against the backdrop of a changing society De Bosatlas has been through quite some developments. In the various editions many physical changes can be detected, including the construction of infrastructure, city expansions and new aviation routes. In addition, the editors had different views on applying certain visualization techniques and on the teaching in geography. The project aimed at showing the reader what had changed in the world, or how the representation of the world had changed, or maybe how the atlas editors thought how the representation of the world should change. For the demonstrable differences between the consecutive maps have something to say about both the factual changes on earth and their interpretation by the atlas editors which in their turn were influenced by the public opinion.

Emeritus professor and the expert on De Bosatlas, Ferjan Ormeling jr, was prepared to write the explanatory texts for the atlas editions and maps. The K.F. Hein Fund and the Fentener van Vlissingen Fund provided the necessary funding to realize the entire project. In June 2017 the project will be finished and officially launched at a symposium. On this occasion publisher Noordhoff will present the newest digital edition of De Bosatlas and a special booklet devoted to the editorial history of the school atlas.

Digitizing the prewar editions

As said before, the project first provided, in digitizing, all prewar editions of the school atlas. It involves a total of 36 separate editions in 37 volumes from the period between 1877 and 1939. The choice for this period was deliberate, taking into account feasibility, copyright issues and a fundamental change in the structure of the atlas after the Second World War.⁴ Speaking of the latter: in the course of the second half of the 20th century the atlas grew from a reference atlas to a thematic school atlas. Approximately 75% of De Bosatlas nowadays consists of thematic map material, as opposed to the approximately 10% of the prewar period. In relation to the physical, national and geographical overview maps these thematic maps lead a fairly short life: after only a few editions they are replaced by completely different thematic maps. That is why a longitudinal comparison between such maps is not very useful. Better suited to this purpose are the mostly traditional physical and geographical maps from the prewar editions.

Digitizing the Bosatlases took place in narrow collaboration with the Amsterdam University Library. In the Utrecht collection some early editions were missing and a loan from Amsterdam solved this problem. All editions, including the Amsterdam ones, were scanned at Utrecht University Library and made available online via the Special Collections website. Each edition of De Bosatlas can be viewed in detail, browsed, has been provided with a matching title description and is available as PDF download (Fig. 4). In digitizing the choice was made to include the maps by spread and the over leaves by page (Fig. 5).

Digital exhibition of Bosatlases

To add insight as well as a well arranged overview to the already digitized Bosatlases a digital exhibition was put up on the website of the Special Collections of Utrecht University Library (Fig. 6).⁵ On the website the separate editions are arranged chronologically. All these editions link to the digitized versions in the digital Special Collections.

⁴ Ormeling (2016b): 36 en 37; Vroege (2015): 14-16.

⁵ <http://bc.library.uu.nl/bos-atlases-mapping-world-1877-1939>

Via ‘More about this exhibition’ you can read more about the background of the project and about the history of De Bosatlas. The editions ‘on display’ are each accompanied by a usually extensive explanation – still in Dutch – in which light is shed on the editorial choices, the historical perspective, the compilation of the atlas and the national changes (Fig. 7). If there are specific differences with the former editions, the differences per map are also commented upon. Finally, at the end of each explanation the complete content is listed according to the index.

The explanations at the digitized editions of De Bosatlas make it clear that the school atlas has always been designed on the basis of didactic principles. Already from the start of Bos’ time the atlas was not meant as a reference work to look up places and areas, but as a didactic means to tell geographical stories. It was done with the help of ‘empty looking maps’, which offered pupils the possibility to observe spatial connections. In the history of De Bosatlas the character of the geographical stories has changed, but the function of teaching tool and the simplicity of the maps remained a central theme.⁶

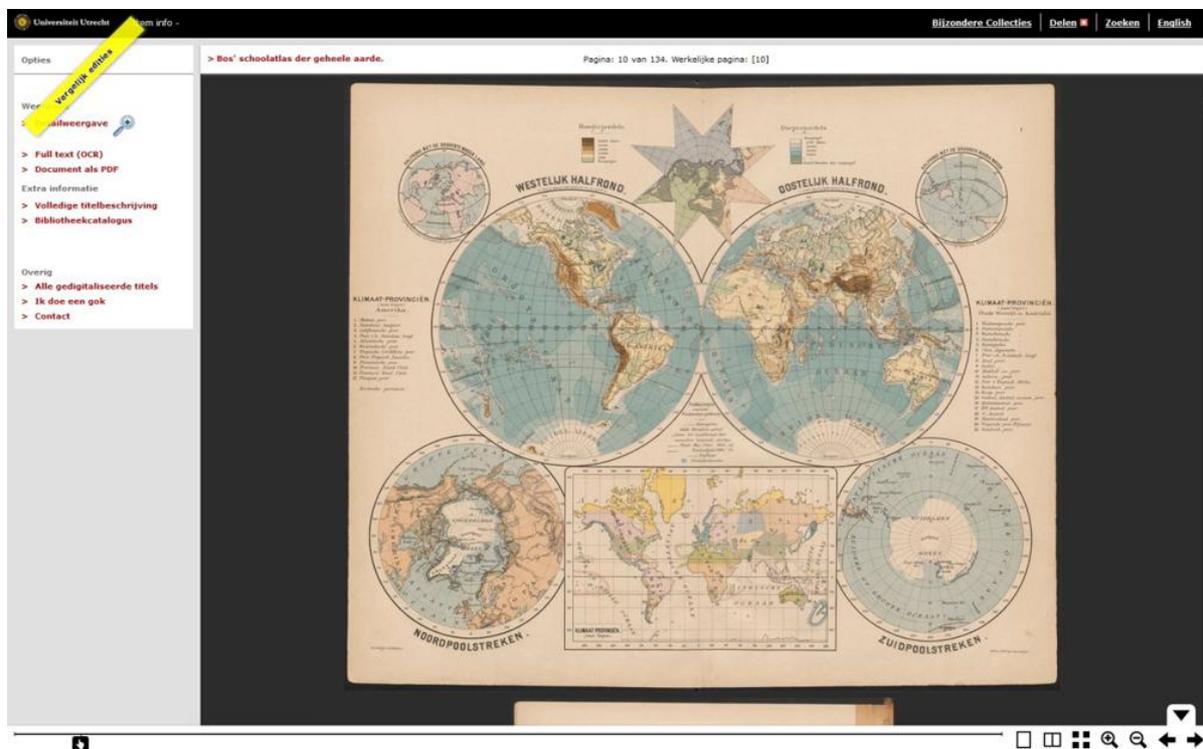


Figure 4: Screenshot of the world map from the 12th edition of De Bosatlas from 1896 in the digital Special Collections of Utrecht University Library.

⁶ Vroege (2015): 14.

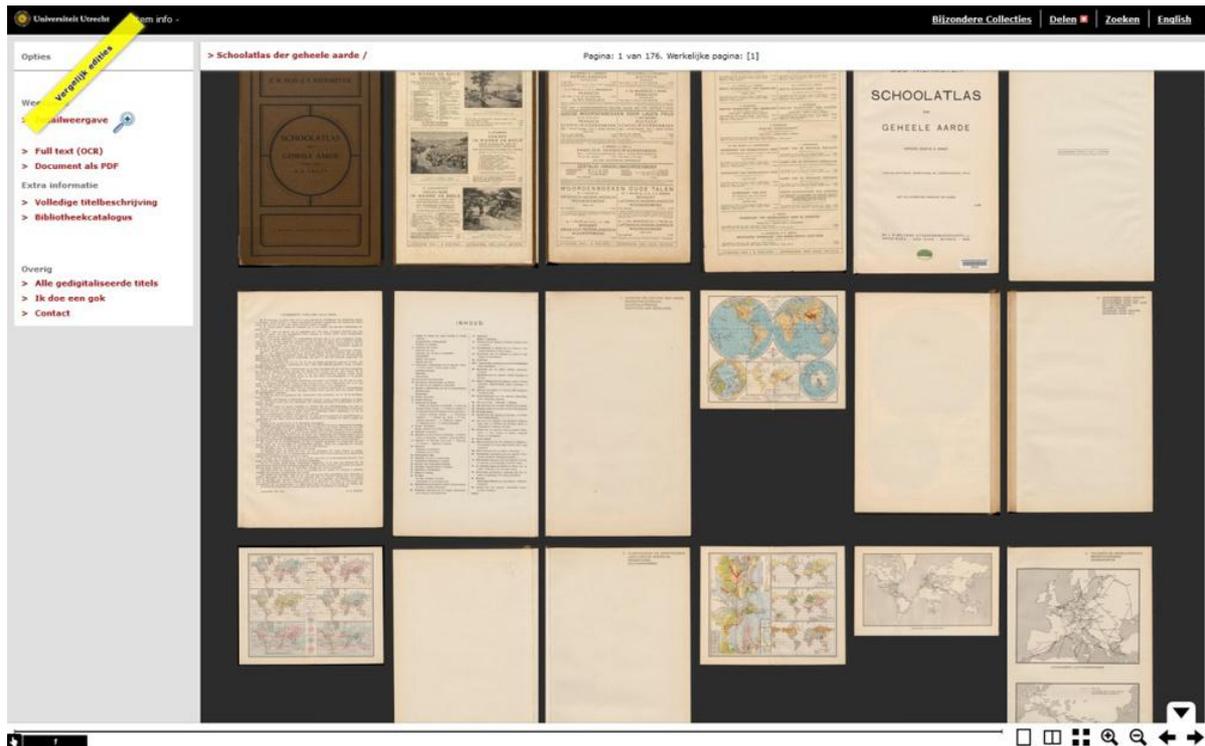


Figure 5. Thumbnail view of the 34th edition of De Bosatlas from 1934 in the digital Special Collections of Utrecht University Library. In this way it is possible to gain quick insight into the contents of the edition, via a kind of map sequence mode.

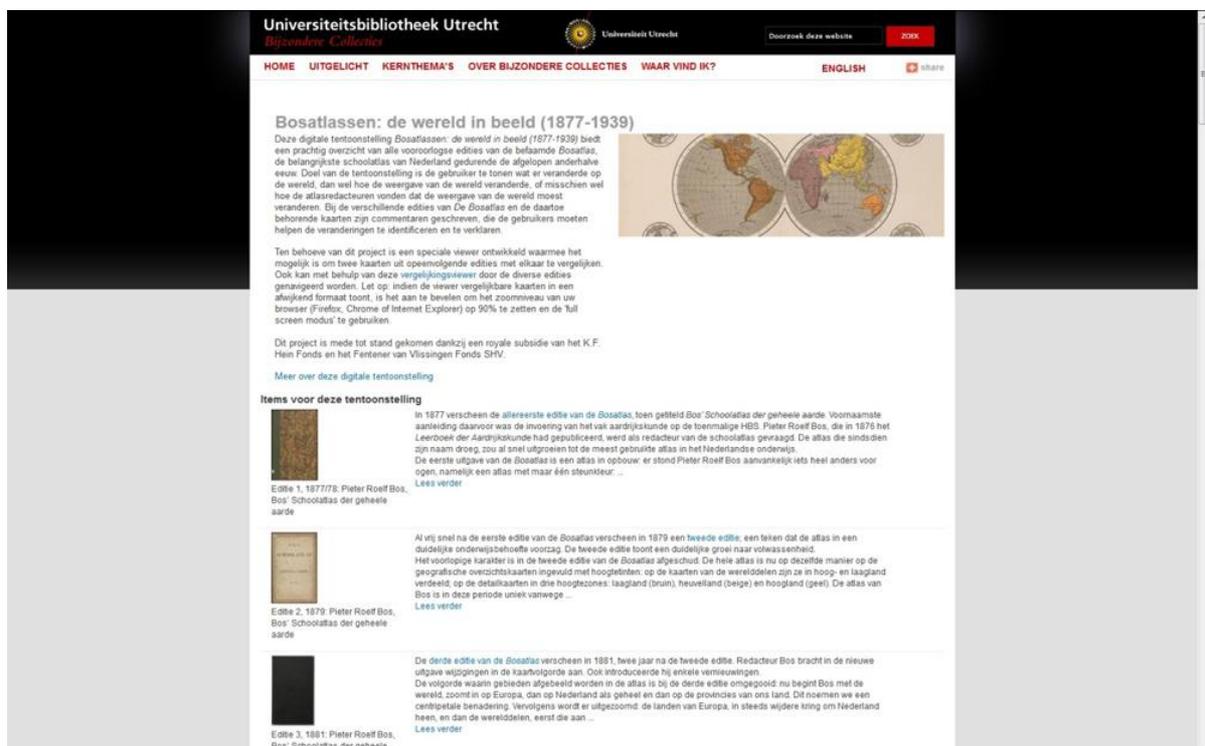


Figure 6. Screenshot of the digital exhibition of the Special Collections of Utrecht University Library (<http://bc.library.uu.nl/bos-atlases-mapping-world-1877-1939>).

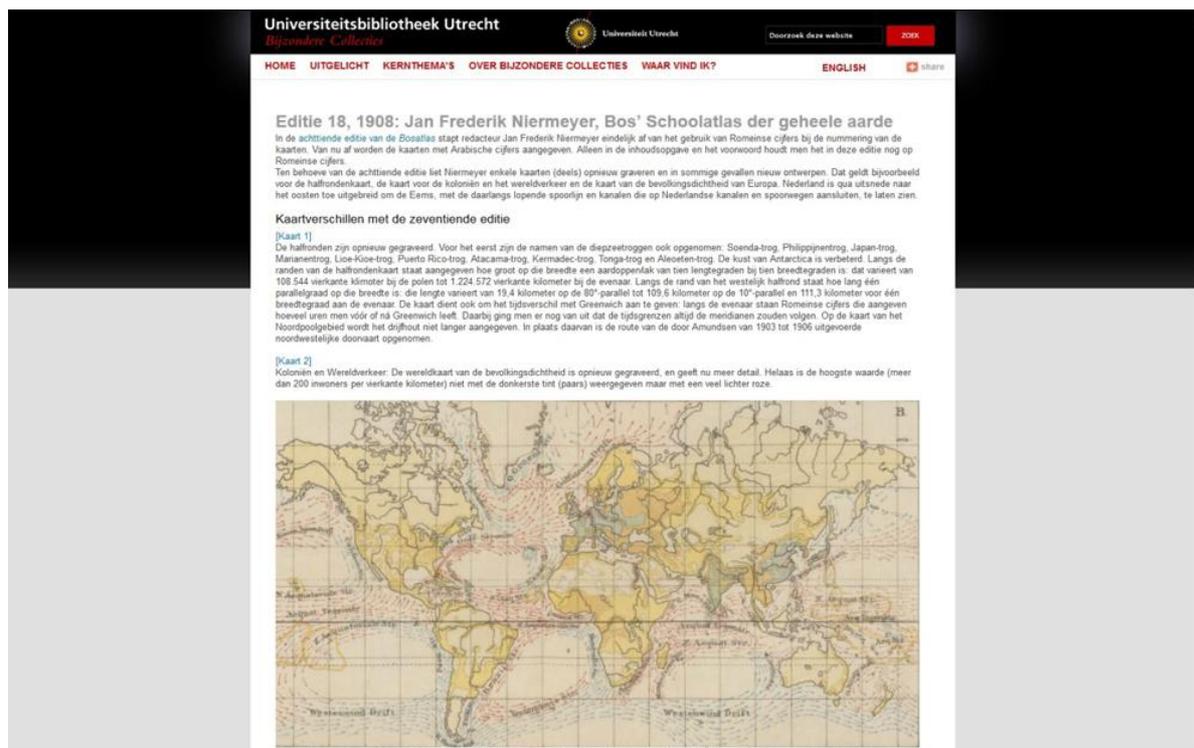


Figure 7. Screenshot of the explanation belonging to the 18th edition of De Bosatlas from 1908 on the website of the Special Collections of Utrecht University Library.

Comparing map imagery

To simplify the comparing of the maps and the interpretation of the editorial changes, Utrecht University Library has developed a ‘synchronisation viewer’ or comparison viewer.⁷

This viewer shows two related map images from consecutive editions of De Bosatlas (Fig. 8).

⁷ Utrecht University Library uses for its advanced viewer the open source software of IIP Image (<http://iipimage.sourceforge.net/>). This software is also used in developing the synchronized viewer, from the first edition of 1877 accessible by the shortened link <http://bit.ly/2laSu8r>. From the digital exhibition (see note 4) distinct

editions and maps are linked separately.

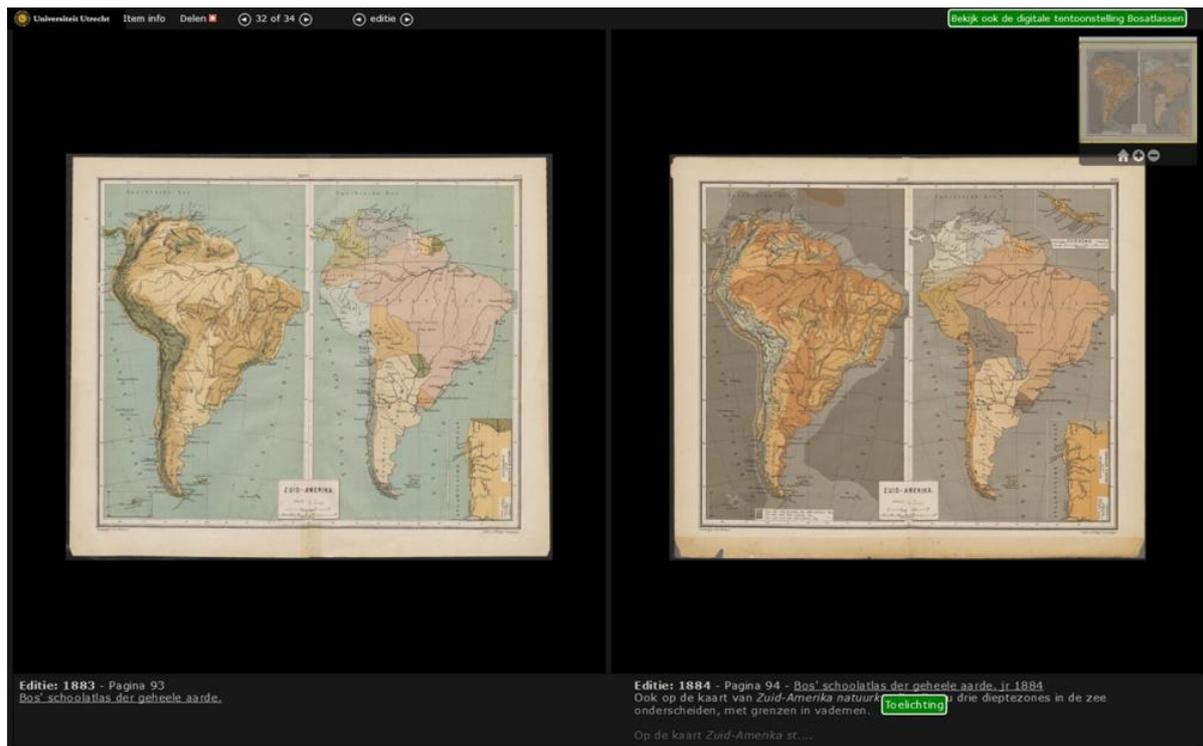


Figure 8: Screenshot of the comparison viewer, showing the maps of South America in the 5th and 6th edition of De Bosatlas from 1883 and 1884 respectively. In the comparison viewer it is possible to navigate through the editions, making a kind of atlas sequence mode possible.

If applicable the matching explanation on the bottom right for a particular map image can be clicked on. This explanation is the same as the one in the digital exhibition. As said before the differences with former editions are viewed. With the exception of the first edition, the annotated edition of De Bosatlas is always to be found in the right hand portal of the comparison viewer and the previous edition in the left hand portal. Both map images can be zoomed in on synchronically, either by scrolling with the mouse or by using the functional keys on the overview screen at the top right (Fig. 9). This is an excellent way to determine if and how the map imagery changed in relation to the previous edition.

In addition to the detailed comparison of relevant atlas maps, the comparison viewer also offers the possibility to browse a Bosatlas. Moreover, users can navigate from one edition to the next, giving them a good impression of the development of a specific map or a political situation. Finally the comparison viewer links to the digitized versions in the digital Special Collections and to the digital exhibition of the Bosatlases. It is also the other way around: each separate map in the digital exhibition has a link to the viewer, in the case of a changed and annotated map image.

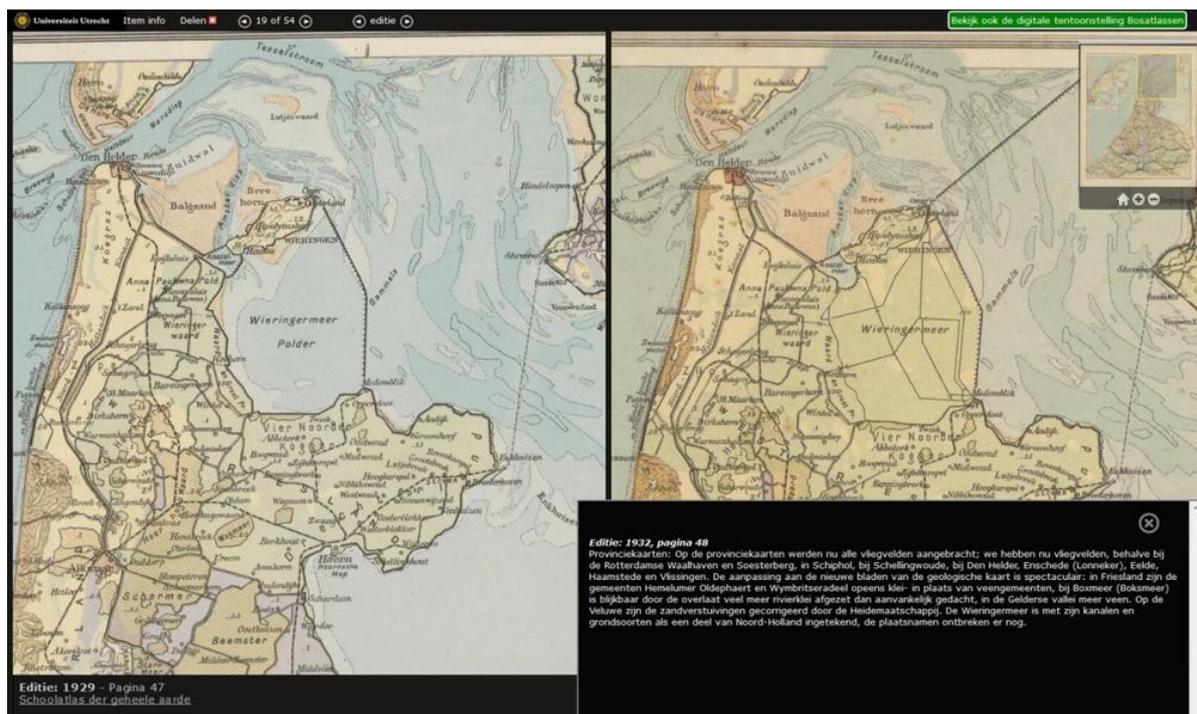


Figure 9: Screenshot of the comparison viewer, with the enlarged maps of North-Holland, South-Holland and Utrecht in the 32nd and 33rd edition of De Bosatlas from 1929 and 1932 respectively. On the bottom right the pop-up screen with the explanations.

Possible use of the application

By digitizing and annotating all prewar editions of De Bosatlas and by offering the possibility to browse these editions and the maps belonging to them, a new kind of online historical atlas has been created as it were.⁸ Because a new edition was published every two years in the period between 1877 and 1939, the school atlas may be a source for longitudinal historical research. The annotated application of Utrecht University Library introduces users to the way in which Dutch citizens in general and atlas editors in particular viewed the world. And it also gives an insight into the way their attitude changed, reflected in the selected map contents and structure of the atlas.⁹

De Bosatlas application can be used by a wide variety of target groups. The general public, who sees De Bosatlas as national heritage, will be able to identify with several atlas maps of, for instance, the Dutch provinces and the overseas territories. More in detail the historical geographers can immerse themselves in the spatial developments such as shown in the large-scale town plans of Rotterdam and Amsterdam (Fig. 10). For researchers of the history of visualization and design techniques the various editions of De Bosatlas offer many leads. Especially chief editor Bos experimented to his heart's content with all kinds of colour schemes in the initial period!

⁸ Ormeling (2016a and b).

⁹ Ormeling (2016b): 36.

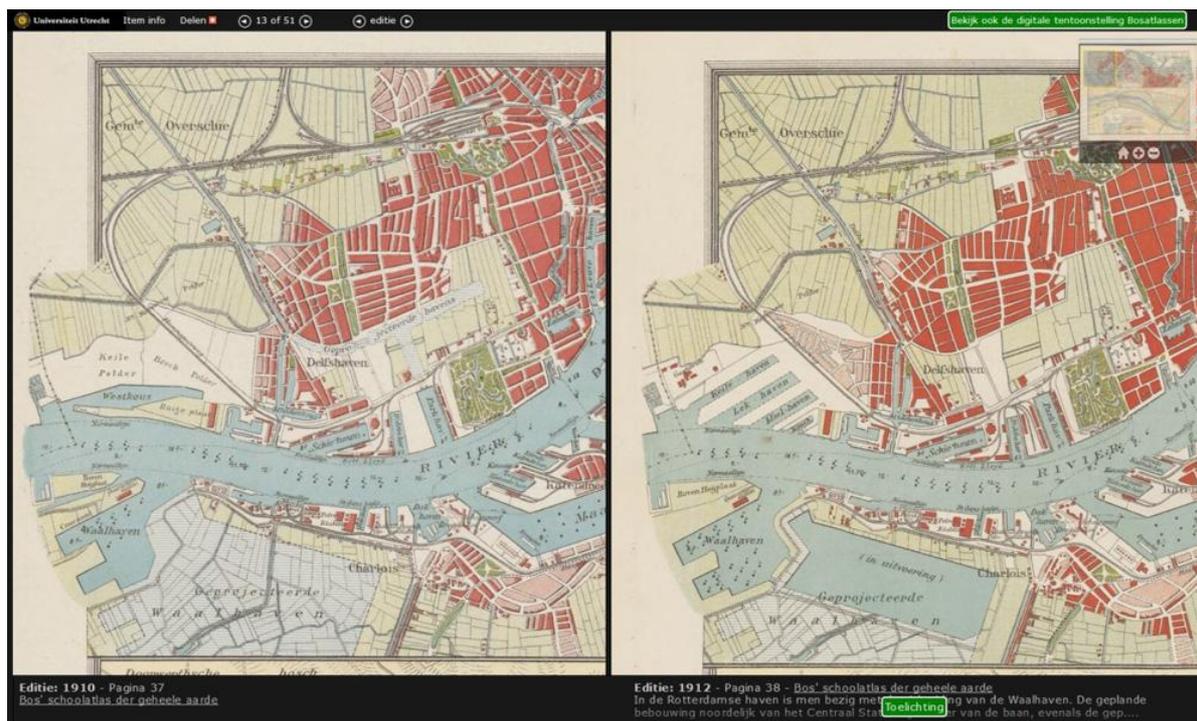


Figure 10: Screenshot of the comparison viewer, with the enlarged maps of the dock works of Rotterdam, Amsterdam, IJmuiden and the Lower Rhine from the 19th and 20th edition of De Bosatlas, from 1910 and 1912 respectively.

Secondary school pupils

One of the major target groups are the secondary school pupils. This is no surprise, because De Bosatlas is meant to be used in the geography lessons in secondary schools. By comparing the atlas editions and atlas maps the pupils gain insight into the development of the knowledge about the world and into the political and physical development of the world. From an educational point of view the application can be used in several ways in secondary schools.¹⁰ Based on consecutive maps from De Bosatlas pupils can describe and analyze the evolution of a particular area. Also changes in the relationships with neighbouring countries are visible, as can be seen from border changes. Another aspect worth researching which emerges from the series of Bosatlases deals with the history of explorative expeditions in specific areas, including the Congo basin.¹¹ To learn the answers to such research questions, the pupils need to understand the editorial process of De Bosatlas. Why have changes been made to the maps? Why are certain maps included? How did society look upon certain events? To find the answers De Bosatlas application can be of use to secondary school pupils. In doing so, they must keep in mind that atlases – and there is also no escape for De Bosatlas – always suffer from a certain kind of bias. This bias is often expressed in a too nationalistic or Eurocentric perspective.¹² For instance in the colonial period we see that in representing buildings on town plans of the overseas territories the major buildings of the

¹⁰ Utrecht University Library is currently consulting the department of Education and Communication of the Utrecht Faculty of Geosciences about possible applications for secondary schools, such as specific teaching lessons and subjects for theses.

¹¹ Ormeling (2016b): 36, 38 and 39.

¹² Ibid.: 37 and 38.

indigenous people are practically ignored, as well as the representation of indigenous states on geographical overview maps!

Future functionalities

With the current comparison viewer it is now possible to zoom in on and navigate within an atlas and between consecutive atlas editions. To reach this goal thousands of relations have been recorded by hand between maps and editions by means of digital codes. In the future, these codes may perhaps lead to extra functionalities in the comparison viewer. For instance links between random editions, making it possible to compare non-consecutive editions. Probably a simpler application will include a dynamic pull-down menu containing all publication years, making it possible to find the map in a particular edition.

Another functionality, which can be useful, is the highlighting or spotlighting of the established changes in the map imagery within a text box. In this way the visitor to the site will see at a single glance where exactly on the map a specific editorial change was made. Finally the viewer would benefit from a map sequence mode, an overview of clickable thumbnails of a certain map making it possible to read out the development of a map image.¹³

It goes without saying that adding this kind of extra functionalities demand, to a greater or lesser extent, extra costs and human effort. For the time being that is still in the future...

Finally

Summarizing it may be said that Utrecht University Library by digitizing and putting online all prewar editions of De Bosatlas, has made a remarkable part of Dutch heritage available to the general public. By comparing consecutive editions and map imagery in a synchronization viewer the former developments in the world and interpretations of the world come to light. Users of De Bosatlas application gain insight into the history of the exploratory voyages, the physical changes, the social-geographical changes, the political changes and the changes in the attitude of the editors.¹⁴ So a lot of changes, but some things remained the same in De Bosatlas. For instance, Mount Vaals upheld its position after 1896 as the highest Dutch point in the atlas. And the mountain is still in the lead in the most recent edition of De Bosatlas!

References

- Egmond, M. v., 2017. 'Een beeld van de wereld tussen 1877 en 1939: de vooroorlogse edities van De Bosatlas online'. *Caert-Thresoor* (forthcoming).
- Ormeling, F., 2005. *m.m.v. Rob van der Vaart, Biografie van De Bosatlas [1877-heden]*, (Groningen : Wolters-Noordhoff, 2005, 136 p.
- , 2006. 'De weergave van Suriname in de Bosatlas 1877-1940'. *Caert-Thresoor* 25.2, 2006: 25-32.
- , 2006. 'The origins of the Bosatlas and its portrayal of Hungary'. In: *Térkép - Tudomány: Tanulmányok Klinghammer István professzor 65. születésnapja tiszteletére = Map - Science: Papers in Honour of the 65th Birthday of Prof. István Klinghammer = Karte - Wissenschaft:*

¹³ See for some very nice potential viewer features the demo version of Mirador: <http://projectmirador.org/demo/>

¹⁴ Ormeling (2016b): 38 and 39.

Festschrift zum die 65. Geburtstag zu Ehren von Prof. István Klinghammer / edited by Zentai László, Györffy János and Török Zsolt, (Térképtudományi = Studia Cartologica; 13), Budapest: ELTE Térképtudományi és Geoinformatikai Tanszék, 2006: 315-322.

———, 2015. ‘The rendering of Greece in Dutch school atlases’. – In: *Cartographies of Mind, Soul and Knowledge: Special Issue for Professor Emeritus Myron Myridis* / Arvanitis, A. et al. (eds.), Thessaloniki: AUTH, 2016: 362-375.

———, 2016a. ‘A Total History Atlas: the Bosatlas editions online 1877-1939’. In: 2016 Conference on the Making of Historical Atlas, Seoul: Northeast Asian History Foundation, 2016: 285-303.

———, 2016b. ‘Een nieuw soort geschiedenisatlas: De Bosatlas online 1877-1939’. *Geo-Info* 2016-5: 34-41.

———, 2017. ‘The Rendering of Iran in a European School Atlas’. *Sahab 80 Years Cartography* (forthcoming).

———, 2017. ‘Colonialism in the Bosatlas’. *History of Cartography Series*. M. Altic et al. (eds.) (forthcoming).

Vroege, P., 2015, ‘De Bosatlas: verleden, heden, toekomst’. *Geo-Info* 2015-1: 14-20.