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Introduction

1   In accordance with its scientific mission to preserve and valorise heritage, KBR has recently conducted a large-scale interwar printed media digitisation campaign as part of the Artpresse interdisciplinary project. Funded by the Belgian Federal Science Policy Office (BELSPO) within the context of its BRAIN-be 2.0 Framework Programme, this project is the result of collaboration and networking between KBR Digitisation Department, the Department of Literary Theory and Cultural Studies at KU Leuven and the Department of History of Contemporary Art at the Université de Liège.[1] As a research project, which is now in the middle of its progress, Artpresse makes use of a corpus which is mainly composed of multi-subject and image-laden illustrated weeklies of general interest, the digitisation of which has led to great advances, which are described in the first part of this article. This concludes with a short overview of the transversal investigations conducted on the digitised files using KBR's digital archive *BelgicaPeriodicals*[2], focusing on art-related materials as an illustration of the possibilities for interdisciplinary and intermedial research.

2   As part of KBR's collections and printed heritage in general, interwar illustrated magazines are fated to slowly disintegrate if not treated in a timely manner. The digitisation, which in the case of Artpresse primarily aims at opening up these collections for research, also helps ensuring the preservation of these fragile and less-known unique sources, alongside the challenges that they represent as a very large quantity of materials to process. The acquisition by KBR of three robotic scanners[3] and their combination of manual and semi-automatic scanning for the digitisation of historical periodical collections in the course of the project, has proven to be successful. With the aim of creating a coherent and comprehensive corpus, more than 300,000 magazine pages have been digitised and published on *BelgicaPeriodicals* which features full-text search functionality to assist research.

3   The documentation work, prior and parallel to digitisation, made it possible to trace an evolution of printed mass media in the interwar years with an emphasis on the multiple connections between illustrated magazines and daily newspapers, as well as press groups, editors, journalists, critics, art institutions, galleries and artists. This anticipated and contributed to the Artpresse study of Belgian art as a networked structure seen through the lens of general illustrated magazines. With their numerous exhibition views and artwork reproductions, printed mass media were a visual and "mass" distribution channel for cultural news while providing a richly illustrated record of our heritage at a time of crisis and societal changes, when art was instrumentalised for commodity purposes.

Digitising interwar magazines

4   The three robotic (DLmini 600) scanners installed at KBR in Autumn 2021 offer great avenues for the digitisation of contemporary books and bound serial publications, given that the volumes easily open to 180°, the bindings are in good condition, the paper is not in an advanced state of deterioration and pages are (partially) not loosened or damaged. As these restrictions may seem to exclude a priori fragile or irregular document bindings, extensive testing results with these machines corroborate to the hypothesis that numerous bound magazines and weeklies from the early 20th Century can likewise be processed when largely complying to aforementioned conditions, and to some extent more homogeneous and more secure.

5   Yet, a certain reluctance, if not deep scepticism towards an automated treatment of fragile historical documents - as the majority of bound interwar periodicals has become by now - seems justified. The idea of only leaving to a robotic scanner the handling of acidic paper dating to the 1920s holding rare, possibly unique printed information, may well trouble the mind of many a dedicated librarian. Occasionally, a failure in turning the page can indeed cause some kind of minor permanent damage to frail pages, upon which the argument may follow that they should have been dealt with manually. However, a full manual approach of bound interwar magazines, not least the repeated turning of brittle leaves in sloppy bindings while imaging, is not without equal risk for involuntary damage either. As we will argue, both automatic and manual digitisation demand specific focus points and require a different mindset to be approached in a complementary way.

6   In order to analyse the potential of automatic digitisation for interwar magazines, and the vast holdings of Belgian periodicals in KBR in general, it is useful to take a closer

look at the material history of these resources. Before being subjected to digitisation in the 21st century, most interwar periodicals in KBR collections have already undergone a first physical transformation (reconditioning) through the binding process (Fig. 1), which can include various manipulations such as cutting borders, removing or regrouping covers and supplements. This binding process brings the objects from single printed issues to a state of bundled book-like objects and could thus be considered as a first 'remediation', which was aimed at their preservation and consultation in the long term, but which will considerably determine their suitability for later automatic digitisation.

Figure 1
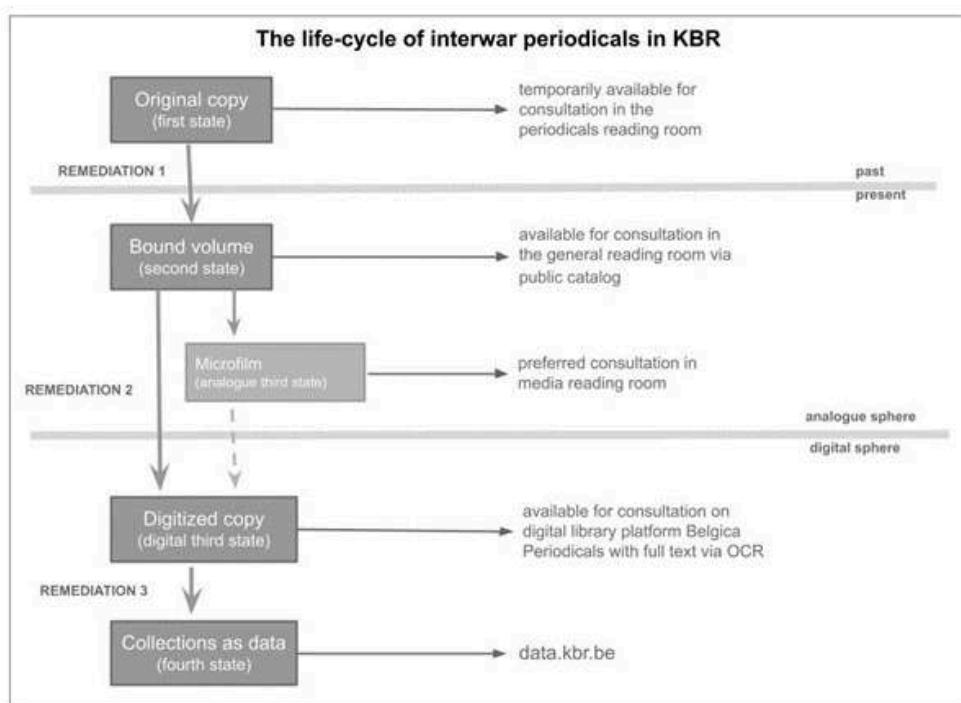
Life cycle of interwar periodicals in KBR

7   Upon arrival in the library in the 1920s and 1930s, individual magazine issues were stamped and temporarily made available for consultation in the periodicals reading room (see: Fig. 1). The subsequent binding of consecutive numbers was executed either within KBR or by external contractors. This process of binding comprised a set of interventions which impacted the original copy. Examples are the moving of elements such as double covers and the removing of supplements to the back of the same or to other bindings, or adding elements, e.g., handwritten notes by a librarian on the discontinuation of a title or small cardboard tabs in between numbers to indicate lacunae. Diligent librarians may have struck-through and corrected erroneous numbering or dates with ink on the cover while preparing the magazines for binding.

8   Common binding practices also included cutting the outer margins, vertically and/or horizontally, so as to reduce the original size of the individual issues, which may vary significantly within a single publication year, to fit them all in uniform bindings. This protective measure, although slowing down the degradation of the page borders, frequently came with the unintentional effect of eliminating valuable (printed)

information. Moreover, the binding of magazines was often performed so tightly causing printed content to run in the gutter, becoming imperceptible for the human eye and so for the (digitising) camera. In many cases covers of the first issues in a bound volume, and thus many original covers, got partially glued on the flyleaf and consequently ruined, as were many of the last backs.

Figure 2

LA SALLE DES PERIODIQUES.

A view on the periodicals reading room in the former Royal Library of Belgium at the end of the interwar era, where many of the magazines now digitised must have spent their first condition[4].

9   When bound magazines have been frequently consulted over decades, the binding, as well as the magazines contained in it, could wear out to a point where rebinding and/or restoration was necessary. Some striking instances are to be found in the Artpresse corpus where pre-war restoration has permanently obscured printed information[5]. On the other hand, we have occasionally found cut-outs by readers, or, less damaging, filled-in crossword puzzles. In the meantime, only a small number of delicately bound interwar magazines has been remediated to microfilm, then packaged acid-free and in some cases withdrawn from public consultation. KBR readers requesting these titles are since redirected to the magazine's third analogue condition in the form of a colourless analogue surrogate.

10   Digitising full runs of historical periodicals in most cases thus turns out to be a remediation from a second **condition** (bound) to a third **condition** in the form of a digital reproduction (TIFF), archived and offered for consultation through derivatives (JPEG without loss) with full-text search (via Optical Character Recognition or OCR) on KBR's digital library Belgica Periodicals[6]. For all advantages it brings, the digital remediation of interwar magazines thus reflects the physical and for the most part irreversible implications of a prior remediation. Yet a further reshaping of the digital condition eventually results in a fourth condition of printed magazines, when they

become available in the form of "collections as data"[7], amenable to computational methods and tools, but intrinsically carrying the consequences of a first as well as a second human-inflicted remediation process.

From manual to automatic imaging

11   Depending on the conditions in which an interwar magazine has lived its second condition, digitisation can now be entrusted to a manual or an automatic imaging process, or, as we will argue, a 'complementary combination' of both. Such a combination can manifest in different ways: (a) a decision to shift from automatic to manual scanning of a selected number or parts within a bound volume when the former for some reason turns out to be too difficult, (b) complementarity in which damaged, first condition copies, issues with loosened pages or parts or otherwise unfit issues in bound volumes are digitised manually while the rest is processed automatically, (c) the optional homogenisation of the output for a mixed-treated magazine title by applying the same automatic post-production software, and (d) correctional interchanges between both methods.

12   The digitisation of entire runs of interwar magazines for the Artpresse project, which de facto started in May 2020 - after the planned onset in March was delayed by the first lockdown after the outbreak of the Covid pandemic - with the manual imaging on a V-shaped Qidenus *Smartbook* installation[8]. With its two crossed-positioned Canon cameras to be calibrated and producing raw images for rectos and versos demanding precarious post-production, it functioned sufficiently as the main scanning dock for first and second condition magazines at the start of the project, projections of which relied heavily on the prior digitisation of ca. 36.000 photo novel pages published in post-war Belgian magazines during the Photo-Lit project[9]. A first i2S Copibook Open System with central lighting[10] however, which arrived in KBR's Digitisation Department that same Summer, soon outclassed the Qidenus system to the extent that the latter was no longer used by the Artpresse project after the end of 2020. Following which significant parts of some magazines in tabloid size, that is roughly similar to A3 page size or ca. 40 x 30 cm, such as *Notre Pays* and *Ons Land* were rescanned on the i2S due to concerns about not meeting image quality standards.

13   When, about one year later, the features of the semi-automatic DLmini 600 robotic scanners[11] were being tested, the flexible and easy-going manual digitisation workflow on i2S Copibook had become routine and the output of digitised interwar magazines had already exceeded the pre-defined project objectives. Nevertheless, the promising addition within KBR's Digitisation Department of automatic scanning technology to the common manual digitisation methods for second condition printed mass media collections was presented by the Artpresse team at the National Libraries Now conference in September 2021[12].

14   At this point in time, we seek to define and question the added value, challenges and potential of automatic imaging with a robotic scanner compared to the reliable and prolific manual procedure on book scanners when it comes down to digitising full runs of bound historical periodicals from the early 20th Century. In general, we observe crucial differences between manual and automatic digitisation on three levels: the overall workflow, the treatment of the documents and the predispositions of the operator.

15 In order to compare both manual i2S Copibook and automatic DLmini 600 procedures for the mass digitisation of bound periodicals we should first of all point out the basic similarities in this case. Both approaches concern the registration, by vertically positioned Eagle cameras combined with central lighting, of bound documents easily opened to 180° which are pushed to a glass plate. Both produce TIFF images in an optical resolution of 300 ppi that comply to the Metamorfoze Light standards for heritage preservation imaging[13] and this under quality requirements that conform as much as possible to the guidelines published by the ADOCHS project[14]. Both manual and automatic processes are supported by the same work document which compiles all necessary information to be registered and used in different stages of the digitisation process (Fig. 2). Both the manual i2S Copibook and automatic DLmini 600 systems impose quasi-identical size limitations, the most relevant to our concerns being a maximal height of ca. 425 mm (~A3 paper format) and a maximal thickness of ca. 100 mm. When it comes down to image production capacity including a first quality-control by the operator, a i2S Copibook can create scans of up to 500 pages per hour from bindings with few complicating conditions, a procedure having little to no faculties for growing in number. This referential production rate is now being strongly challenged for the very same objects by the same operator on a single DLmini600, including file transfer and automatic image post-production.

Figure 3

Yr	Nr	Date	sc#	Remarks	# pgs	Sup1	Sup2	issue	TOTAL	IDN	POSTPRODUCTION
18	38	18/09/1932	223		20	24		44	528	15431975	BE-KBR00_B-15431975_1932-09-18_38
18	39	25/09/1932	243	First issue of Ons Kleine Volkje - 1	20	16	8	44	572	15431975	BE-KBR00_B-15431975_1932-09-25_39
18	40	02/10/1932	263	Ons Kleine Volkje - 2	20	16	8	44	616	15431975	BE-KBR00_B-15431975_1932-10-02_40
18	41	09/10/1932	283	Ons Kleine Volkje - 3	20	16	8	44	660	15431975	BE-KBR00_B-15431975_1932-10-09_41
18	42	16/10/1932	303	Ons Kleine Volkje - 4	20	16	8	44	704	15431975	BE-KBR00_B-15431975_1932-10-16_42
18	43	23/10/1932	323	Ons Kleine Volkje - 5	20	16	8	44	748	15431975	BE-KBR00_B-15431975_1932-10-23_43
18	44	30/10/1932	343	First issue of Ons Volkske - 6	20	16	8	44	792	15431975	BE-KBR00_B-15431975_1932-10-30_44
18	45	06/11/1932	363	Ons Volkske - 7	20	16	8	44	836	15431975	BE-KBR00_B-15431975_1932-11-06_45
18	46	13/11/1932	383	Ons Volkske - 8	20	16	8	44	880	15431975	BE-KBR00_B-15431975_1932-11-13_46
18	47	20/11/1932	403	Ons Volkske - 9	20	16	8	44	924	15431975	BE-KBR00_B-15431975_1932-11-20_47
18	48	27/11/1932	423	Ons Volkske - 10	20	16	8	44	968	15431975	BE-KBR00_B-15431975_1932-11-27_48
18	49	04/12/1932	443	Ons Volkske - 11	20	16	8	44	1012	15431975	BE-KBR00_B-15431975_1932-12-04_49
18	50	11/12/1932	463	Ons Volkske - 12	20	16	8	44	1056	15431975	BE-KBR00_B-15431975_1932-12-11_50
18	51	18/12/1932	483	Ons Volkske - 13	20	16	8	44	1100	15431975	BE-KBR00_B-15431975_1932-12-18_51
18	52	25/12/1932	503	Ons Volkske - 14	20	16	8	44	1144	15431975	BE-KBR00_B-15431975_1932-12-25_52
19	1	01/01/1933	1		20	16		36	36	15431975	BE-KBR00_B-15431975_1933-01-01_01
19	2	08/01/1933	21		20	16		36	72	15431975	BE-KBR00_B-15431975_1933-01-08_02

Fragment from the worksheet accompanying the (automatic) digitisation workflow of *Ons Volk* 1932.

16 A worksheet (Fig. 3) forms the backbone of the digitisation method for magazines, allowing operators to specify compositional features indispensable for further steps in the digital remediation. The example concerns the volume carrying the second half of the 18th series or publication year (in this case coincident with the calendar year 1932) of Flemish illustrated weekly *Ons volk.* As from nr. 39 *Ons volk* came with two different sets of supplements which during the binding process were taken out, cut and bound in at the back of the volume, each set bundled separately. The second of these sets represents the first 8 paged numbers of *Ons Volkske* - interestingly called "Ons kleine volkje" in proper Dutch in the first five issues -, continued from 1933 as an individual magazine. Although elementary, when not detailed yet in the pre-operational stages, these specifications are preferably attested while scanning (manual), or as soon after as possible in the course of a thorough quality control of the scanned images (automatic).

17　The manual workflow has technically no need for any image post-production (Fig. 4). This optional workflow reduction is made possible by the flexible, user-friendly features of the i2S Copibook system which allow for applying definitive cropping on both left and right page scans throughout a scanning session. Yet this subtle simplification obliges an additional focus point on the operator, which is the constant fine-tuning of gutter margins and horizontal borders via a pc-mouse. Provisional storage of manual scans happens directly on shared KBR drives, which means that, after the ingestion of descriptive metadata, they are immediately available for a second very important step in the digital remediation of a magazine, which involves the virtual reconstruction of the individual issues with the images taken from a single bound volume.

Figure 4
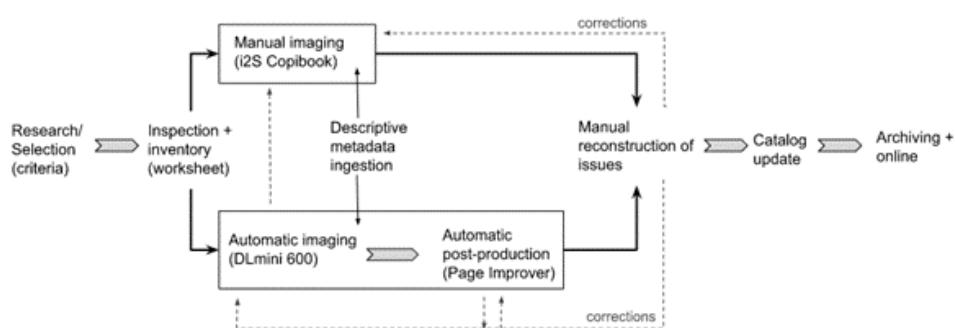
Manual and automatic digitisation workflow for bound periodical volumes

18　Automatic imaging evidently does not enable operators to apply a final cropping simultaneously. Neither can their eyes follow each capture result, certainly when operating two or three robotic scanners at once. A thorough visual control of the recorded images is consequently crucial for validating the output. Splitting, cropping and de-skewing of the images is carried out automatically on separate workstations within the KBR digitisation department with pixel-detecting software developed and provided by 4DigitalBooks[15]. Although very effective and fast, automatic post-production may also produce fail results that are noticed late, e.g. due to dark backgrounds preventing page borders to be rightly detected. Moreover, to guarantee fluent and adequate performance in both components of the automatic workflow, the capturing and the post-production of the TIFFs has to be undertaken locally, which means the files have to be transferred (whether automatically or manually) from local stations to shared KBR storage drives where they can be found by an operator to execute the reconstruction.

19　As hinted to earlier, entrusting automatic page-turning in fragile bound volumes of second condition interwar magazines to robotic scanners may seem troublesome at first glance. Whereas the i2S Copibook manual scanning allows for almost any flat object to pass effortlessly, even fully disintegrated loose pages, the minimal document criteria for automatic processing are much higher. For example: for a dedicated DLmini 600 operator not having sufficiently inspected a volume at hand and dealing with three simultaneously scanning DLmini 600's, matters can result in a single, almost loosened page undetected beforehand, being released from the binding while being turned, then for just one second sticking via electrostatic effect to the retracting glass plate, gets

airborne in the locked scanning cabin and disappears via the gutters in the back-space of the machine, unnoticed.

20 Automatic scanning thus requires a much more detailed treatment of documents in the preparation stage as well as basic insights in the materiality and anatomy of second condition periodicals. This entails certain manipulations less relevant to the i2S copibook operator. Examples hereof comprise practices such as 'book massage' to 'relax' the volume or facilitating automatic page-turning by inserting tightly a coated wooden stick ("nunchaku" in operators' slang) between the footband and the spine of a bound volume (see: Fig. 5). When preliminary detecting vertically damaged or partly loosened pages, inlays in different sizes or at any other locus in the volume where difficulties may be expected, operators can insert customised black paper in order to make the scanning halt automatically, upon which they can proceed manually and restart the automatic process at will.

Figure 5
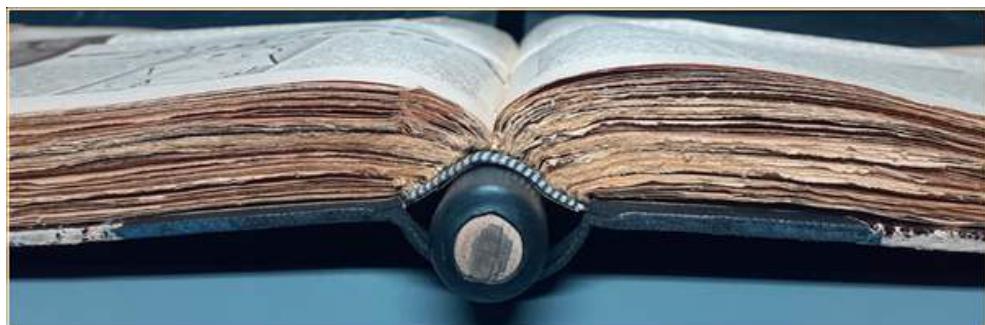
Before scanning a tightly bound volume of periodicals, a suitable coated wooden stick ('nunchaku') has been carefully inserted in between the footband and spine of the (undamaged) binding, pushing the gutter upwards so as to optimise the capturing of marginal print. This 'primitive' yet effective feature coming along with robotic scanning (4 sizes delivered by 4DigitalBooks) can obviously serve also in manual scan sessions.

21 The two main scenarios in which human intervention on the physical object is inevitable during an automatic scanning session are firstly all automatic interruptions occurring when the DLmini's robotic arm is not able to lift two, more or no pages for turning because they remain stuck together after several automatic trials had failed to separate them. This not an uncommon situation when scanning interwar magazines and in most cases is caused by damaged, degraded or uncut page borders (horizontal damage). The second most common scenario urging for immediate human intervention concerns page turning fails caused by small vertical fissures or irregularities in the pages' upper and bottom margins or on their surface, or by another small obstruction, or just by inadequate parametrisation of turn and return distances between book and glass plate, all of this leading invariably to subsequent turning fails if the scanning process is not deliberately interrupted. In the first scenario, the operator just has to separate the pages by touching them and make sure there is only one lying on the optical sensor in the glass plate border (the 'moustache', see Fig. 5 below) in order to be turned over when the automatic process is resumed. In the second scenario, the wrongly turned page has been skewed and pushed to the glass plate, leaving small pleat marks and occasionally minimal permanent damage. Here the operator has to restore the situation manually, flatten the surfaces of the pages, preferably reinspect the following pages, then proceed with a few manual scans, optionally adapt parameters'

values and hope (or learn) that the problem does not reoccur when resuming in automatic mode.[16]

The cycle of turning pages and capturing images automatically by a DL mini 600 robotic scanner:

Figure 6.1

The book is pushed from beneath onto the glass plate right before the camera (above) takes an image.

Figure 6.2

The volume is lowered and the glass plate, spearheaded by the moustache, retracts to the right side, followed by the robotic arm. Lasers indicate to the arm precisely when the outer border of the volume is reached.

Figure 6.3

Guided by the lasers and, if necessary, by the operator who controls the parameter settings, the robotic arm repositions itself.

Figure 6.4

The robotic arm now turns over 90° in order to pick up the right page on its border by use of distributed vacuum.

Figure 6.5

The page border is sucked onto the vacuum arm and thus gets lifted up as the arm turns back 90°.

Figure 6.6

The robotic arm releases the page while the moustache glides underneath it. The sensors ('eyes') in both arm and moustache detect the object in between as a single sheet of paper. If for some reason this would not be the case, the process starts all over from phase 6.3.

Figure 6.7

The arm and the moustache move alongside each other to the left so that the page is tilted up iver the glass plate.

Figure 6.8

The page is turned as the moustache pushes it over the gutter, after which the volume is pressed from beneath to the glass plate for capturing (see Fig. 6.1).

22 Automatic scanning nonetheless considerably reduces physical contact between operators and objects and continues doing so as operators keep refining their mastery over inspection, manipulation and attuning the scanning parameters. From a preservation point of view - as we are dealing here with patrimonial heritage collections - and based on the digitisation output (see: Fig. 5) we could even argue that robotic scanning of bound interwar periodicals is overall safer and cleaner than any possible manual processing, given average binding, paper and size conditions. This bold statement follows careful tests and observations, such as the striking gentleness with which pages with degraded, cracked or restored borders were turned automatically by a DLmini 600's arm and moustache, as well the 'rescans' of the first year of *Ons Land*, as the first post-war volume of *Le Soir illustré*. The latter carries many of the classic problems for automatic treatment, from varying tabloid sized copies up to 42.5 cm high with occasional restorations done on uncut pages with crumbling borders, to double page spreads with information loss in the adjacent inner margins of facing pages, all packed and preserved in a tight binding with curved panel boards. It is therefore not the most ideal book for a robotic scanner.

23 Although other factors, not the least snippets and dust, may trouble these instances of automatic scanning successes, they could be nonetheless opposed to the messy situations in which an i2S Copibook operator wearing fingertip-blackened Vitril gloves faces a desperate attempt to avoid leaving ink stains on the very same type of printed pages. Manual imaging of bound magazines intensely provokes manipulation of the printed paper surface in order to obtain optimal scanning results, the (Vitril) gloves worn to do this spotlessly weaken sensory control when touching borders to turn the pages, which then, as many an operator may attest, significantly increases the possibility of causing involuntary damage in the process. Evading tactile contact on printed press paper surfaces seems as inadmissible as it is unavoidable.

24 Submitting periodical bindings to either manual or automatic digitisation workflows thus appears to be a matter of methodical and tactical choice which should be supported by a strategy. As the dotted arrows in Fig. 3 evoke, automatic scanning workflows are still much more apt to leave fail scans unnoticed in and throughout different stages of the process, which urges for an effective correctional approach. Detecting and correcting scanning fails or omissions post-factum, by rescanning specific pages or reprocessing them in the automatic post-production stage when the original scans are still at hand, is technically and physically much harder to effectuate than just rescan a small number of pages on an i2S Copibook OS. This brings us back to

the combination hypothesis and the impact on the operator's abilities and mindset to manage optimal remediation of bound periodicals to a digital condition, which are with the arrival of automatic processes fundamentally challenged in terms of workflow decisions, document handling, damage control, persistent quality control and output ambitions.

Digitisation output of the Artpresse project

25   The addition of robotic scanning equipment and automatic post-production tools to the conventional (manual) methods in KBR's digitisation department has deeply influenced the course of action within the Artpresse project. Automatic digitisation has since contributed significantly to the consistently diverse corpus of digitised magazines available for the project's research and for the wider interest they deserve. First of all, it did so by making it possible to process entire runs of titles held in relatively favourable conditions that had entered the project's digitisation wish list somehow later, a complete manual treatment of which would have claimed considerable time resources (notably *Ons Volk* and *Le Soir illustré*). For many interwar years of *Le Patriote illustré*, comprising a series of bindings less suitable for automatic processing, we could make use of first condition copies found in reserve holdings within the library's Contemporary Prints department, to complete the digital collection's page-level lacunae or in case of content damage attested in the bindings. While these single issues were to be scanned manually, time-gaining automatic treatment could be applied on several bindings of the regular collection.

26   The option of automatic digitisation has also enabled the Artpresse project to digitise smaller titles closely related to the prime-selection magazines, so as to complete their editorial history and context (see: Fig. 7). Examples are the well-preserved collections of the youth weeklies *Ons Volkske* and *Ons Kinderland* in relation to *Ons Volk* and *Ons Land*, the complete series of the daily 16-paged magazine *Antwerpen 1930* in relation to its direct offspring *Zondagsvriend*, and a number of magazines surrounding core titles *Tout* and *Wereldrevue* by Antwerp-based publisher Patria, such as weeklies *Femme*, *De Vrouw* and *Prenez-moi*, and the monthly *Patria magazine*. Furthermore, a number of monthlies has been processed automatically, which in manual-only circumstances would, according to strict selection criteria, not have made it to the scanning dock, but yet all the more bear witness to the diversity and forgotten beauty of printed mass media and magazine culture in 1920s and 1930s Belgium. Among these are *La Gaule, Pégase magazine* and *Englebert magazine*.

Figure 7

Artpresse digitization output on Belgica Periodicals (May 2020 - July 2022)									
Scan order	KBR call nr.	Title(s)	period	# issues	Manual (Qidenus)	Manual (Metis)	Manual (i2S)	Automatic (DLm 600)	Avg # pgs per issue
1	B 457	Pourquoi Pas? (inexhaustive)	1910-1940	591	25.292				42,80
2	B 5.211	Bonjour	1939-1940	47	1.456				30,98
3	B 944	Ons Land	1919-1940	1.095			17.084	6.974	21,97
4	B 923	Notre Pays	1919-1924	257	2.504		1.674		16,26
5	B 3.438	Tout	1932-1934	152			4.804		31,61
6	B 4.064	Libra	1933-1935	110			2.788		25,35
7	B 3.171	Wereldrevue	1931-1936	307			9.544		31,09
8	B 4.880	De Illustratie	1936-1937	91			2.366		26,00
9	B 3.580	A-Z	1932-1937	[275]		[9.632]			35,03
10	B 3.477	ABC	1932-1940	433			14.012		32,36
11	VI 7.660 B	Voir & Lire	1926-1928	71			1.454		20,48
12	B 3.288	Soirées / Rex illustré	1931-1936	235			8.040		34,21
13	B 3.405	Hebdo	1931-1940	440			36.424		82,78
14	B 3.437	De Stad	1929-1941	662			19.224		29,04
15	III 99.771 B	Magazine illustré national	1924-1926	96			2.062		21,48
16	B 2.946	Zondagsvriend	1930-1940	491			12.780		26,03
17	B 409	Le Patriote illustré	1918-1940	1.114			21.234	6.656	25,04
18	B 524	Ons Volk	1911-1940	1.241			7.434	25.696	26,70
19	B 2.495	Le Soir illustré	1928-1945	634		806	3.496	13.790	28,54
20	III 99.896 C	Antwerpen 1930	1930	189				3.024	16,00
21	B 4.125	Ons Volkske	1933-1938	274				2.196	8,01
22	B 5.173	Ons Kinderland	1937-1938	83				1.168	14,07
23	B 3.142	De Vrouw	1930-1935	244			3.646	2.912	26,88
24	B 3.791	Femme	1931-1934	131				3.576	27,30
25	B 3.135	Katholieke Illustratie	1931-1935	220				7.032	31,96
26	B 4.458	Patria Magazine	1933-1940	87				7.302	83,93
27	B 2.758	JOC	1930-1939	295				5.170	17,53
28	B 2.287	KAJ	1933-1939	89				2.756	30,97
29	VI 7.659 B	L'Evénement illustré	1915-1920	238			4.188		17,60
30	III 99.924 C	Echos	1932-1933	52			1.092		21,00
31	B 2.018	Le Moustique	1925-1940	714			2.104	26.746	40,41
32	III 91.305 C	Le Peuple illustré	1919-1921	93			972		10,45
33	B 4.432	Prenez-moi / Sans blague?	1934-1939	272			144	10.684	39,81
34	B 5.100	Reflets	1937-1940	13			1.484		114,15
35	B 2.685	La Gaule	1929-1930	31				1.450	46,77
36	B 3.738	Pégase magazine	1931-1933	17				804	47,29
37	B 101	Englebert magazine	1920-1939	123				13.320	108,29
38	VI 7.653 B	Pallieter	1922-1928	317			1.120	3.956	16,01
Total pages digitized per scanning station					29.252	806	179.170	145.212	
Total produced of i2S Copibook and DLmini600 (Fig. 5)				10.755	0		324.382		30,16
Total Artpresse output on July 15, 2022				11.549			354.440		30,69

List and production numbers of digitised interwar illustrated weeklies and magazines ranked in chronological order of entering the Artpresse digitisation workflow.

27 Although these enrichments of KBR's online media collections have been amplified by automatic digitisation, a full and coordinated implementation of automatic processes in KBR digitisation workflows for periodicals is still in its early days. However, while the above-mentioned titles were being processed (semi-) automatically with increasing success, the amount of interwar magazine material assigned to manual treatment gradually grew smaller and more delicate.

28 A well-defined strategy based on 'optimal' complementarity of the two methods for the digitisation of vast, complex, and partly damaged exhaustive runs of bound 20th century printed mass media titles in KBR holdings urges to be further explored. The monthly uploads of magazine pages in Belgica Periodicals (Fig. 8), covering the overall digitisation output of the Artpresse project realised on both i2S Copibook OS and the DLmini600's may give already an indication of how a complementarity of automatic and manual digitisation processes in KBR for bound mass media heritage collections may evolve in the near future. Two titles printed in the 1920s on decaying paper and are being processed and published online at the time of writing this article, further support the case for an optimal complementarity wherein a substantial large part of integral issues in the different volumes that constitute the collection can be effectively processed automatically, and a well-defined selection of issues showing specific damages or loose pages can not but undergo manual scanning[17].

Figure 8
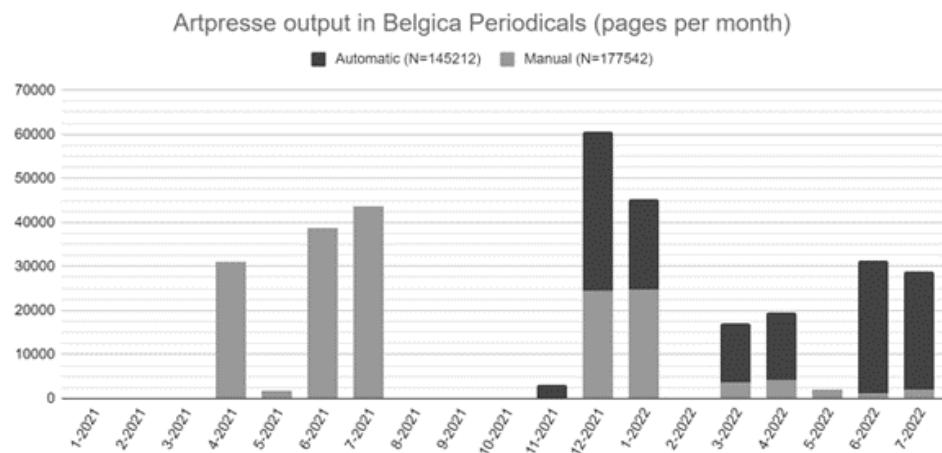
Monthly figures of bulk publication in Belgica Periodicals of the ca. 320.000 interwar magazine pages digitised manually on the i2S Copibook and automatically on the DLmini600 machines.

29 As the digitisation of interwar magazines is embedded within an interdisciplinary research project, it not only aims to provide faithful reproductions that can adequately replace the originals, but also to detect and share useful observations on form and content between researchers, such as editorial changes, specific authors or the recurrence of a fine arts section. The adoption of automated scanning and post-production methods thus has repercussions on the first collection of content information from these primary historical resources when remediating them integrally into the digital sphere. While manual digitisation procedure(s) imply a full physical contact between the object and the operator, who in many cases then literally performs a 'last analogue reading', turning every single page, any close monitoring of the magazine's characteristics and content amidst automatic digitisation processes can only be fragmentary. This is most important as to update and enrich relevant research data, but also the catalogue records, all being sustained by the images, the metadata and the documentational notes generated during the digitisation.

30 In order to advance on the research questions, every bit or hint of information retrieved during digitisation on the background, editorial context and mutual relations of the magazines and illustrated weeklies under scrutiny is much welcomed since secondary literature is very sparse on this particular type of media heritage[18]. In accordance with international trends, scholarly attention for Belgian printed media from the early 20th century as a primary historical source in the digital age has much been centred on the history of journalism and the disclosing of vast newspaper collections[19] on the one hand, and modernist, avant-garde or artistic and literary magazines on the other[20]. However, illustrated weeklies and magazines as they first flourished in the dynamic media landscape of the interwar period and now become digitally available, show intricate, elucidating yet understudied connections between popular press and the pluriform world of the arts. Many titles digitised in the Artpresse project (Fig. 7) were published by or alongside Belgian newspapers in which they were promoted ('propagated') or at least regularly referred to (e.g. *Zondagsvriend* by Gazet van Antwerpen, *Ons Volk* by De Standaard and *Le Soir illustré* by Rossel)[21]. Only one title, *A-Z hebdomadaire illustré*, founded by the Dutch Brussels-based magazine entrepreneur

Jan Meuwissen[22] and affiliated to the socialist press, had been digitised earlier within a KBR partnership project on Belgian literary periodicals[23], although it is conceptually equivalent to the other prime magazines of general interest within the Artpresse research corpus, notably its continuation as from 1937 under the title *Bonjour!* (of which KBR's collection unfortunately lacks the first two publication years) and its Flemish counterpart *ABC*. Together with its Luxemburgisch sister magazine *A-Z Luxemburger illustrierte*[24], this cluster of Belgian 1930s illustrated weeklies, now finally and quasi-fully digitised, exemplifies as well the complexity of the multilingual and internationally entangled Belgian interwar magazine 'market' reflecting an ideological pillarised society, as the ambiguous reception of these historical media resources today, finding themselves situated between scholarly interest in press, journalism, literature, the arts, 'periodicals' and commerce.

Analysing the reception of Belgian art in digitised printed mass media

31   As an interdisciplinary project, Artpresse aims at combining a digitisation component with an *intermedial analysis* of Belgian art seen through the lens of printed mass media. This analysis focuses on the reception of the Belgian artistic scene and its aesthetic debates during the years 1920 and 1930 and operates on both the texts and the images by taking into account their visual aspects and their support as fully part of their materiality. The research method has evolved following the different phases of digitisation and benefiting from the developments and efforts made by KBR's Digitisation Department, which enabled the project to extend and open the corpus to magazines that did not appear in the first selection (reduced to 80,000 pages). This extension was therefore an opportunity to experiment with *mass digitisation* – given their volume in KBR's print collections, periodicals lend themselves very well to this operation –, and take advantage of KBR's digital archive *BelgicaPeriodicals* and its research possibilities to 'unlock' contents related to art through printed mass media. Moreover, there was an urgent need to work on digitised files since the Artpresse project started at the very beginning of the COVID health crisis, in March 2022, and access to physical collections was, therefore, limited.

32   A page-by-page scrutiny was initially carried out by looking through a few selected collections of magazines on a specific period (from 1930 to 1935) using Belgica Periodicals' viewer. However, this procedure soon proved to be insufficient and very time-consuming as the corpus was gradually growing. We created tables of art-related contents and indexes of the names of authors and artists appearing in the corpus on a regular basis. We conducted full-text searches based on these names as well as concepts that were discussed in the press during that time ("living art", "pompiers", "crisis of painting", "return to the subject"). From this viewpoint the interbellum in Belgium was an intense period which witnessed the institutionalisation of the artistic field[25], the development of a "modern" criticism of art[26], and the simultaneous "confrontation" of various trends and canons which are disseminated at different levels: daily newspapers, specialised journals, as well as illustrated weekly magazines. In these, art discourses are deployed through two categories of elements: the illustrated articles and artistic plates, and the cultural sections, of which we will shorly present some samples as examples of art reception in printed mass media.

Illustrated articles and artistic plates

33 Our first investigations led us to the French and Dutch language magazines from the socialist ideological family: *AZ* (1932-1937), which has already been digitised, *Bonjour!* (1937-1940) and *ABC* (1932-1940), as they were related to socialist daily newspapers *Le Peuple* (1885), *Vooruit* (1884) and *De Volksgazet* (1914). Due to their "social" orientation, they particularly addressed the working-class readership in order to make culture more popular and accessible. Coming from different publishers[27], they were printed by the Dutch Rotogravure Company (Leiden) that used this specific technique for richly illustrated magazines. They first caught our attention because of their numerous artistic plates of landscapes and still lifes on full pages (see on example in Fig. 9). The reproduced artworks being for a large part signed and/or captioned, a great variety of artists' names have been identified, one of them being Laurent Robberecht who worked for both magazines as a visual and graphic artist. We learned that he was responsible for the graphic design of both magazines thanks to two articles published[28] in his honour on the occasion of his death. This information is precious as "layout makers" remain generally unknown due to a lack of signatures or archives. Both magazines promoted Belgian artists in a series of articles with the same layout that we attributed to Robberecht, and those devoted to him as well as Edgar Bijtebier, Jean Dratz, Maurice Langaskens, published during their first two years of publication, but with sometimes variations in the French and Dutch language texts and which hide distinct political intentions despite their commercial and even consensual appearance.

In the centre, artistic plate from *AZ*, 1:17 (17-07-1932), see illustration p. 5, signed by Laurent Robberecht, with two other examples. The same plate can be bound in *ABC*, 1:15 (17-07-1932), see illustration p. 5, and related to the article shown in Fig. 10:

Figure 9.1

9.1 AZ, 1:5 (29-04-1932), see illustration p. 21

Figure 9.2

9.2 AZ, 1:17 (17-07-1932), see illustration p. 5

Figure 9.3

9.3 AZ, 5:42 (03-01-1937), see illustration p. 29

Figure 10
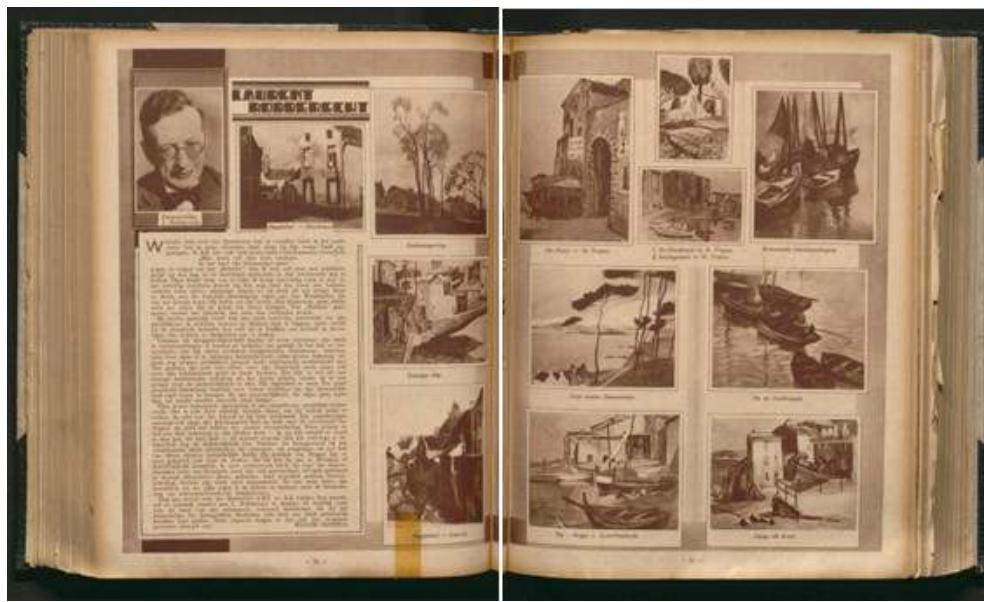
Illustrated article in *ABC*, 1:25 (17-07-1932), see illustration p. 10 and p. 11. The same can be found in *AZ*, 1:17 (17-07-1932), see illustration p. 10 and p. 11.

34   The names of the agencies and, more rarely, of the photographers were also among the material data that we were looking for in connection with articles on art, particularly the review of collective exhibitions, which constitute a second category of illustrated articles identified alongside the artists' portraits seen before. These are often illustrated with views of the venues and exhibited works, as on the occasion of the 1935 Brussels World Fair, which was widely reported in the press (both daily and weekly), notably in *Hebdo* (1931-1940). In Figure 10, the article displays reproductions of framed artworks credited "Ph. Germaine Van Parys" (1893-1983), known as the first woman to be recognised as a photojournalist in Belgium, having worked for *Le Soir*, *Le Soir illustré* and *La Meuse*.[29] In addition to photographs of major events, of everyday life or of royal portraits which made her reputation, the reproduction of works of art was another of her professional activities during the interbellum, thus unlocked by the Artpresse corpus. Her photo credit appears on a regular basis and she is also mentioned as a journalist. The text on the modern art section is by Lucas Rizzardi and praises in particular the works of Belgian artists, underlined by the quality of the reproductions of the photographer which fulfil a function of artistic propaganda.

Figure 11

Illustrated article in *Hebdo,* 4:187 (05-07-1935), see illustration p. 12 and p. 13.

Cultural sections

35   Common in the specialised press, chronicles or columns dedicated to visual (or fine) art provided a space for authors to express their tastes and opinions. As the director of *Le Soir illustré* (1928-1945), Henri Liebrecht (1884-1955) animated the "Beaux-Arts" section (in addition to the literary one called "Le Rayon des Livres") sometimes with the help of his colleagues Richard Dupierreux (1891-1957) and Armand Sauvage. Since the beginning of its publication, the magazine advertised the cultural life of Brussels and this interest in art grew following its material evolution.[30] The title font, the number of pages, the articulation of texts and images varied greatly from issue to issue as can be seen in Fig. 5, which is a recurring feature of interwar periodicals. Besides reviews of exhibitions organised by the Palais des Beaux-Arts and the Cercle Artistique et Littéraires – two main cultural actors of that time –, the section was used as a showcase for exhibited works in private galleries chosen by Liebrecht according his affinities (Galerie des Artistes français, Studio, Nos Peintres, La Toison d'Or, etc). He favoured awarded and established artists and overshadowed a whole part of the artistic production which did not correspond to his own criteria, reflecting and imposing an elitist vision of art.

Overview of the "Beaux-Arts" section of *Le Soir illustré* over the years:

Figure 12.1

12.1 *Le Soir illustré*, 2:54 (02-03-1929), see illustration p. 3

Figure 12.2

12.2 *Le Soir illustré*, 3:108 (15-03-1930), see illustration p. 18.

Figure 12.3

12.3 *Le Soir illustré*, 5:245 (29-10-1932), see illustration p. 8.

Figure 12.4

12.4 *Le Soir illustré*, 6:263 (04-03-1933), see illustration p. 27.

Figure 12.5
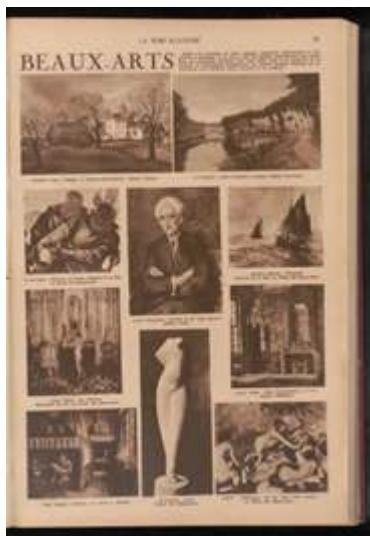
12.5 *Le Soir illustré*, 7:316 (10-03-1934), see illustration p. 15.

Figure 12.6

12.6 *Le Soir illustré*, 8: 421 (14-03-1936), see illustration p. 11.

36 As part of the movement for the emancipation and promotion of Flemish culture and language, of which the priest and writer Hugo Verriest (1840-1922) was one of the pioneers, *Ons Volk* (1911-1984), which began in the first year of publication, then after an interruption, started again in 1925 until about 1930, and *De Stad* (1928-1941), from 1929 to 1931, continued the tradition probably inspired by his book "Twintig Vlaamsche Koppen"[31]. Less interested in visual art, "Van Vlaamsche Koppen" by *Ons Volk* was open to various personalities (priests, philosophers, writers, doctors, politicians, etc.), leaving the subject of painting to Jef Crick, one of the magazine's contributors and a journalist for *De Standaard*, known for his art reviews and artist interviews.[32] "Vlaamsche Koppen" of *De Stad* (Fig. 6) was dedicated to Flemish artists in a broad sense (writers, composers, painters, sculptors, etc.). Lode Zielens (1901-1944) and Leo Arras (1904-1979), who signed under a pseudonym ("L. Sarolea"), were the

main animators of the column; two journalists – and a writer in the case of Zielens –, who were known for their political commitment. More consistent than *Le Soir illustrée* in terms of layout and pagination, "Vlaamsche Koppen" fulfilled a mission of popular education in accordance with the vocation of the Flemish illustrated magazines, in particular from the catholic ideological family, and in which Flemish artists occupied a prominent place.

Figure 13

"Vlaamsche Koppen" section in *De Stad*, 2:43 (10-01-1930), 947 [see illustration p. 15].

37   A certain number of journalist-writers were identified in the course of our research and for whom the Artpresse corpus "unlocked" less known or even unsuspected contributions in one or more magazines that we were able to track thanks to the full-text search.[33] We conducted more detailed investigations with the help of secondary sources in order to fill in gaps, to find traces on their editorial practices since it is often difficult to know exactly what their role and influence were within the editorial and writing teams.[34] However, we have faced (and still are) many methodological challenges. So far, we have relied mostly on contextual and material information, and mostly considered the textual component rather than visual or commercial. The two main categories of art-related contents that we presented very briefly represent only a limited part of the artistic materials that can be found within the Artpresse corpus. This excludes, for example, cartoons which are nonetheless of great richness and convey art discourses as well. In doing so, we have adopted a method – with the aim of reconstructing these discourses with an idea of unity criticised by Mark W. Turner in his article on "The Unruliness of Serials in the Nineteenth Century (and in the Digital Age)"[35] – which adapts uneasily with the variety of printed mass media and the "visual discontinuity" of serial culture. We are also aware of reproducing the usual divisions between media productions (labelled as "middlebrow", "popular", "modernist" and

"little" magazines).[36] It now remains to complete, compare, cross and pursue our efforts in an objective of interdisciplinarity and intermediality.

General conclusion and prospects

38   The phenomenon of patrimonialisation of historical collections of printed mass media increases the interest of these sources for scientific research and this in several fields in the Humanities, which means strong expectations from researchers that libraries realise massive digitisation campaigns of their enormous collections and that they valorise them online. Here, we are speaking about millions of pages. To do so, the use of automatic book scanners constitutes an interesting approach, potentially qualitative and efficient. The case of the Artpresse corpus demonstrated the added value of this approach. However, it also highlighted some limitations and the obligation to envisage a kind of hybrid scanning methodology built on the joint use of both automatic and manual book scanners.

39   In parallel, it is now evidenced that the Artpresse corpus is full of resources that are to be explored and exploited. Diversifying and enlarging the corpus has been a necessary and very fruitful procedure, reconstituting an important and more coherent part of the Belgian interwar media landscape and reflecting more the plurality of forms and contents that characterise printed mass media. However mass digitisation comes with the major difficulty of processing a huge volume of files and we have therefore decided to confine ourselves to art-related contents. This acted as a "filter" and a "focus", shedding light on diverse journalistic and graphic activities as well as different modes of reception of art. The contribution of printed mass media to our visual culture and art history has yet to be further investigated, and for this, the use of full-text search is more than helpful. However, the layout using numerous illustrations, various typography, and oblique text blocks, lead to troublesome recognition and loss of information coming along with digitisation. For this reason, the next phase of the Artpresse project includes, in addition to the completion of the digitisation and the deepening of the historical and intermedial study, research to improve the accessibility of the corpus. Also, the future implementation of the IIIF technology at KBR will ensure a better visualisation of the magazines while allowing the addition of metadata and contextual information. Artpresse thus participates in the digital turn taken by the library in order to enhance its collections through digital and scientific treatment.

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NOTES

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3. KBR. 3 robots scanners pour numériser 15.000 pages par jour. *KBR* [online]. Available on: <https://www.kbr.be/fr/robots-scanners/>>

4. This picture was published among many others in an article on the occasion of the centennial of the library by DOMMARTIN, H. Un grand déménagement en perspective … la Bibliothèque royale. *Reflets : magazine de la vie belge.* February 1939, p. 25-29, stating: "*La salle des périodiques contient 72 places et des casiers pour près de 3.000 revues. Elle est trop petite.*"

5. See e.g. the cover of *Tout* 1:1 (15-01-1932), 1.

6. The image-laden nature and sometimes very creative lay-outs on double page spreads in the magazines and periodicals under scrutiny in the Artpresse project result in cases of recurring shortcomings in OCR results, some of which have recently been exchanged with the new KBR digital research lab (https://www.kbr.be/en/projects/digital-research-lab) i.c. concerning the photographic reportage magazines *Tout* and *Wereldrevue*. At this stage, however, it is too early to report any substantial progression in this direction as further action is planned for the fall of 2022.

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16. To illustrate these interruption of the automatic process we refer to the presentation videos of the DLmini600, created by 4DigitalBooks (https://www.youtube.com/user/4DigitalBooks) especially the one on managing exceptions and difficulties: https://youtu.be/n7Sk1p5jwrM.

17. *Pallieter* (1922-1928), for which 70 out of the 317 issues (21%) were scanned manually, and the first decade of *Le Moustique* (1925-1935) for which just 52 (one full publication year in one bound volume) out of 565 issues (or 9,2%) had to be processed manually.

18. A brief and incomplete overview of the interwar Belgian illustrated periodical press can be found in the exposition catalog s.n. *150 ans à la une. Un siècle et demi d'information illustrée en Belgique.* Bruxelles : Crédit Communal de Belgique, 1980, p. 73-93, also published in Dutch. Sporadic references to press-related periodicals are made by DE BENS, Els, RAEYMAECKERS, Karin. *De pers in België: het verhaal van de Belgische dagbladpers gisteren, vandaag en morgen.* Leuven: LannooCampus, 2010. Valuable though scattered information on the interwar editorial history of *Ons Volk* and *Ons Land* was gathered by DURNEZ, Gaston. *De Standaard. Het levensverhaal van een Vlaamse krant.* Tielt: Lannoo, 1985, and GHESQUIÈRE, Rita, QUAGHEBEUR Patricia. *Averbode een uitgever apart 1877-2002.* Averbode, 2002.

19. Such as the current KBR projects in collaboration with CAMille: https://www.kbr.be/nl/projecten/camille, and others on metadata extraction from digitized historical newspapers, e.g. https://tw06v072.ugent.be/kbr/. Another example is the Flemish program for the preservation of newspaper heritage Nieuwe Tijdingen : https://vlaamse-erfgoedbibliotheken.be/activiteit/nieuwetijdingen

20. DE MARNEFFE; Daphné. Antwerp circles: languages, locality, and internationalism. *The Oxford critical and cultural history of modernist magazines Volume III, Europe 1880-1940 Part I.* ed. by Peter BROOKER, Sacha BRU, Andrew THACKER and Christian WEIKOP. Oxford: Oxford University Press, 2013. p. 313-335; MUS, Francis VANDEVOORDE, Hans. 'Streetscape of new district permeated by the fresh

scent of cement': Brussels, the avant-garde, and internationalism. *Ibidem.* p. 336-360; MAYEUR, Ingrid, ARON, Paul, GEMIS, Vanessa. Journalisme et littérature en Belgique francophone : bilan et perspectives. In: *La recherche sur la presse : nouveaux bilans nationaux et internationaux.* ed. Micheline CAMBRON and Stéphanie DANAUX, *Médias 19* [online]. 2021. Available on: <https:// www.medias19.org/publications/la-recherche-sur-la-presse-nouveaux-bilans-nationaux-et-internationaux/journalisme-et-litterature-en-belgique-francophone-bilan-et-perspectives>

21. KBR. Home. *BelgicaPress.* [online]. Available on: <https://www.belgicapress.be>

22. Jan Meuwissen (1883-1954) is mainly known as the first publisher of the still existing magazine *Femme d'Aujourd'hui* (1933) and as the founder-director of the legendary Flemish comic magazine *Bravo* (1936-1944). LAMBEAU, Frans. *Dictionnaire illustré de la bande dessinée belge sous l'Occupation.* Waterloo: André Versaille éditeur, 2013. p. 177-181.

23. ARON, Paul (dir.). Presse et littérature en Belgique francophone. *La Digithèque* [online]. ULB, 2008-2013. Available on: <https://digitheque.ulb.ac.be/fr/digitheque-revues-litteraires-belges/ index.html>. The (manual) digitization of *A-Z* dates back to 2012 and the 9.632 images, covering its complete interwar production as held in KBR, have been added to Belgica Periodicals.

24. BIBLIOTHÈQUE NATIONALE DE LUXEMBOURG. A-Z : Luxemburger illustrierte Wochenschrift. *Luxemburgensia online* [online]. Available on: <https://luxemburgensia.bnl.lu/cgi/luxonline1_2.pl? action=info&sid=azillust>

25. DEVILLEZ, Virginie. *Le retour à l'ordre. Art et Politique en Belgique 1918-1945.* Bruxelles: Labor, 2002; DEVILLEZ, Virginie. The Avant-garde and the Reworking of the tradition. In: AUBERT, Nathalie, FRAITURE, Pierre-Philippe, MCGUINESSE, Patrick. *From Art Nouveau to Surrealism. Belgian Modernity in the Making.* Modern Humanities Research Association, Maney Publishing, 2006. p. 142-152; DEVILLEZ, Virginie. Les arts en crise : La Belgique dans le contexte européen (1918-1940). *Textyles* [online]. 2004, n°24, p. 52-62. Available on: <https://journals.openedition.org/textyles/719>; MONTENS, Valérie. *Le Palais des Beaux-Arts. La création d'un haut lieu de culture à Bruxelles 1928-1945.* Bruxelles: Éditions de l'Université de Bruxelles, 2001; KURGAN-VAN HENTENRYK, Ginette, MONTENS, Valérie. *L'argent des arts. La politique artistique des pouvoirs publics en Belgique de 1830 à 1930.* Bruxelles: Éditions de l'Université de Bruxelles, 2002.

26. NAHON, Valérie. Profil d'une critique moderne : Charles Bernard et la défense de l'art vivant dans l'entre-deux-guerres en Belgique. *Textyles* [online]. 2010, n°39, p. 63-84. Available on: <https://journals.openedition.org/textyles/101>

27. Jan Meuwissen (Brussels) for *AZ/Bonjour!,* and the cooperating societies ('samenwerkende maatschappijen') Het Licht (Gent) and Ontwikkeling (Antwerp) for *ABC.*

28. In *ABC*, 2:35 (24-09-1933), 3 & *AZ*, 2:27 (24-09-1933), 3.

29. LEENAERTS, Danielle. Belgian photography between the two world wars. In: AUBERT, Nathalie, FRAITURE, Pierre-Philippe, MCGUINESSE, Patrick. *From Art Nouveau to Surrealism. Belgian Modernity in the Making.* Modern Humanities Research Association, Maney Publishing, 2006: p. 6. See also: http://germainevanparys.org/fr/

30. The magazine format changed a few times during its existence "in order to increase its text and number of articles" (in *Le Soir illustré*, 4:199 (12-12-1931), 2) and therefore giving more space for art matters.

31. In *Ons Volk*, 3:33 (16-08-1913), 386 [2].

32. VAN PAMEL, G. , CRICK, Jef. *Ons Volk.* 12/02/1928. XIV, n°7, p. 102 [6].

33. For instance, Henri Liebrecht also contributed to two other magazines printed by the same company as *Le Soir illustré*, C. Van Cortenbergh (Brussels) and included in the Artpresse corpus thanks to the mass digitisation: *L'Événement illustré* (1915-1920) and *Voir & Lire* (1926-1928) which included exhibitions reviews and artists portraits (some of them being signed by himself). *Voir & Lire* was presumably the first magazine attempt by the press group Rossel & Cie, which launched

the daily newspaper *Le Soir* (1887) as the first politically neutral and partially free newspaper funded by commercial advertising which was managed by the Rossel Agency.

34. A difficulty pointed out by Gaston Durnez in his study on *De Standaard.* There are practically no documents (administrative, editorial) left from the beginnings of *Ons Volk* and that it is therefore necessary to have recourse to personal correspondence and memoirs (DURNEZ, Gaston. *De Standaard. Het levensverhaal van een Vlaamse krant 1914-1948.* Tielt: Lannoo, 1985. p. 39).

35. TURNER, Mark W. The Unruliness of Serials in the Nineteenth Century (and in the Digital Age). *Serialization in Popular Culture.* ed. Rob Allen and Thijs van den Berg. London: Routledge, 2014. p. 19.

36. STEAD, Evanghélia. 'Petites' VS 'Grandes' revues. Une réévaluation. *Revue d'Histoire littéraire de la France.* January-March 2022, n°1, p. 11-26. Available on: <https://www.jstor.org/stable/26927763>

ABSTRACTS

This contribution aims to highlight the potential of automatic digitisation for the preservation and the valorisation of printed media heritage through the case of mass-market illustrated magazines produced in Belgium during the interwar years (1918-1940). As extensive bound collections of these resources held in KBR's Contemporary Printed Books Department form the main corpus of the interdisciplinary research project ARTPRESSE*, which studies Belgian art and media landscape as networked structures seen through the lens of these serialised publications, their mass digitisation and disclosure on issue level questions and challenges current practices and predetermined goals. Starting from the manual digitisation workflow developed for bound periodicals collections in an early stage of the project, we will explain how extensive testing of semi-automatic scanning has yielded convincing results given the complexity and frailty of these collections and how this has dramatically widened the scope of the initial digitization objectives and research methodology. Fragile, but complete for the most part, and despite sometimes frequently requested for consultation, this corpus represents an extremely large and diverse quantity of materials that remain largely understudied. In pair with digitization and disclosure, we will argue that these 'popular' magazines, heavily image-loaded, hold strong historical, cultural and social relevance, not only for understanding Belgian art, but as 'modern' printed heritage should be of great interest as well for the scientific community as for a broader public.
*ARTPRESSE is a research and digitisation project funded by the Belgian Federal Science Policy Office (BELSPO) within the context of its BRAIN-be 2.0 Framework Program, under the coordination of the KBR Digit Department, and with the collaboration of the Department of Literary Theory and Cultural Studies at KULeuven and the Contemporary Art History Department at ULiège.

Cette contribution vise à mettre en évidence le potentiel de la numérisation automatique pour la préservation et la valorisation du patrimoine médiatique imprimé à travers le cas des magazines illustrés grand public produits en Belgique dans l'entre-deux-guerres (1918-1940). Les vastes collections reliées de ces ressources conservées au Département des livres imprimés contemporains de la KBR constituent le corpus principal du projet de recherche interdisciplinaire ARTPRESSE*, qui étudie le paysage artistique et médiatique belge en tant que structures en réseau vues à travers l'objectif de ces publications en série. Leur numérisation de

masse et leur divulgation au niveau du numéro interrogent et défient les pratiques actuelles et les objectifs préétablis. En partant du processus de numérisation manuelle développé pour les collections de périodiques reliés, nous expliquerons comment des tests approfondis de numérisation semi-automatique ont donné des résultats convaincants compte tenu de la complexité et de la fragilité de ces collections et comment cela a considérablement élargi la portée des objectifs de numérisation initiaux et de la méthodologie de recherche. Fragile, mais complet pour l'essentiel, et bien que fréquemment demandé en consultation, ce corpus représente une quantité extrêmement importante et diversifiée de documents qui restent largement sous-étudiés. En association avec la numérisation et la divulgation, nous soutiendrons que ces magazines « populaires », fortement chargés d'images, ont une large pertinence historique, culturelle et sociale, non seulement pour comprendre l'art belge, mais aussi en tant que patrimoine imprimé « moderne » qui devrait présenter un grand intérêt aussi bien pour la communauté scientifique que pour le grand public.

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Deze bijdrage wil het potentieel van automatische digitalisering voor het behoud en de valorisatie van gedrukt media-erfgoed onder de aandacht brengen aan de hand van de geïllustreerde tijdschriften voor het grote publiek die in België werden uitgegeven tijdens het interbellum (1918-1940). Uitgebreide ingebonden collecties van deze bronnen die in de afdeling Hedendaagse Drukwerken van KBR worden bewaard, vormen het corpus van het interdisciplinaire onderzoeksproject ARTPRESSE*, dat het Belgische kunst- en medialandschap bestudeert als netwerkstructuren gezien door de lens van deze seriële publicaties. Massale digitalisering en ontsluiting op het niveau van hun individuele nummers dagen de gangbare praktijken echter grondig uit en stellen de vooropgestelde doelen van het project evenzo in vraag. Vertrekkende van het handmatige scanproces dat ontwikkeld werd voor ingebonden tijdschriften, leggen we uit hoe uitgebreid testen van semi-automatisch scannen overtuigende resultaten heeft opgeleverd ondanks de complexiteit en kwetsbaarheid van deze collecties, en hoe dit de reikwijdte van de initiële doelstellingen en onderzoeksmethodologie aanzienlijk heeft verruimd. Dit corpus is kwetsbaar, maar in hoge mate compleet en hoewel het regelmatig ter raadpleging wordt gevraagd, vertegenwoordigt het een omvangrijke en diverse hoeveelheid documenten die grotendeels onderbelicht zijn gebleven. In samenhang met de digitalisering en de ontsluiting betogen we dat deze 'populaire' tijdschriften, rijkelijk beladen met afbeeldingen, een brede historische, culturele en sociale relevantie hebben, niet alleen voor een beter begrip van Belgische kunst, en dat dit gedrukte erfgoed van groot belang zou moeten zijn voor zowel de wetenschappelijke gemeenschap als het grote publiek.

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Mots-clés: numérisation de périodiques, numérisation automatique, patrimoine de la presse écrite, culture magazine de l'entre-deux-guerres, art Belge contemporain
Trefwoorden digitalisering van tijdschriften, automatisch scannen, gedrukt media-erfgoed, moderne Belgische kunst, tijdschriftcultuur in het interbellum
Keywords: digitisation of periodicals, automatic scanning, print media heritage, interwar magazine culture, modern Belgian art

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