"History Education in the Digital Age"
GENERAL REPORT
Second annual Forum for History Education

Brussels, 7-8 March 2023

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Council of Europe

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Executive Summary

The 2nd Annual Forum of the Council of Europe on History Education took place in Brussels on 7 and 8 March 2023. The Forum was held by the Council of Europe Education Department and co-hosted by the Flemish Department of Education and Training and the Pedagogical co-ordination Department "Démocratie ou barbarie" from the Ministry of the Walloon-Brussels Federation. 70 participants from 26 countries gathered to learn about and discuss the challenges and opportunities posed in history education by the digital age and artificial intelligence (AI). The main outcome of the Forum was the acknowledgment that digitalisation, use of digital tools in education processes and AI are here to stay. After the experience of online and blended learning during the Covid-19 pandemic, teachers have found themselves facing another challenge, namely a very rapid change in digital technologies and its impact on teaching and learning. In this respect, the Forum was timely. There was a need to discuss the history education processes which are being challenged by digital technologies and the rise of AI. Showcases and discussions were held, focusing on the opportunities and limits of digital technologies in history education. After two days of intense keynote lectures, panel discussions, workshops and presentations, it was clear that basic historical methods – use of primary sources and critical reading are still important and irreplaceable despite all the fascinating developments that technologies bring. Teachers have the opportunity to supplement traditional methods with innovative technologies. Teachers should not worry about being "replaced" by robots and instead embrace the fact that they are stepping into another role, becoming learners themselves. The digital age has introduced us to the new reality that teachers are not the only ones in the classroom who can provide knowledge. Their roles have now been doubled, making them both teacher and learner, as technologies are developing fast, and ongoing learning and adjustment have become indispensable. On the other hand, digital tools such as Chat GPT are just tools and will indeed remain tools, not solutions. The role of pre-service teacher training in providing future teachers and practising teachers with the skills needed to face this new, digital reality is very important. It is obvious that education cannot wait for the results of scientific research to deal with the impact of the digital age on history education; the time to act is now. In the plenaries and workshops there was scepticism, and fear. It is important to accept that AI technologies are widespread – they predict and help to finish text and they are embedded in the EdTech software used in schools. The role of teachers in the digital age has been in the spotlight and the conclusion we might draw is that at this time, digital changes in history education are essential, but not the only necessity. Teachers play a crucial role in youth development, but it is unfair to assign them the burden of preparing students for the digital world. Teachers have to familiarise themselves with the use of digital technologies and with ethical demands before employing AI and virtual reality in their classrooms. This is why guidelines, such as the those published by the European Union and the Council of Europe and found in teacher-training programmes and communities of practice, can play a vital role in digital readiness. Most encounters with history education happen in non-academic settings, mainly in video games and social media. At this intersecting point, academia, teachers, parents and students should work together to find a way to enhance historical thinking. It should not be forgotten that tremendous influence is being brought to bear by digital tech companies, mostly private ones, on what education provides in the public interest sphere. Keeping (quality) education free and accessible for all is more important now than ever before. Policy makers, educators, teachers, parents and students, will undoubtedly have a role in this.

Introduction

The Second Annual Forum for History Education "History Education in the Digital Age" was held by the Council of Europe Education Department in Brussels, at the Flemish Department of Education and Training, on 7 and 8 March 2023. It was co-hosted by the Flemish Department of Education and Training and the Pedagogical co-ordination Department "Démocratie ou barbarie" from the Ministry of the Walloon-Brussels Federation. Around 70 participants from 26 countries – history education experts, history teachers, Council of Europe and NGO representatives, policymakers and government officials – gathered to discuss and learn about the challenges that the digital age is posing to history education. The first day began with introductory remarks given by the Director of the Pedagogical Co-ordination Unit on Democracy or Barbarism of the Ministry of the Wallonia-Brussels Federation and representatives of the Flemish Community in the Belgian Department of Education and Training, the European Commission Directorate General for Education, Youth, Sport and Culture, and the Council of Europe Directorate of Democratic Participation. After the opening remarks, Dr Frederic Clavert, of the University of Luxembourg, gave a keynote lecture on history education in the digital age and reflected on a new era in history – an era of networks, data and cognitive degradation. Teachers' initial experiences were presented during the panel discussion on "Video games and history education",

in which first-hand experience of the development and use of video games in history education were shared with participants. On the afternoon of the first day, the participants attended seven workshops on subjects including digital tools to combat holocaust distortion, artificial intelligence and history education, students' digital environment, fake news and history education, critical evaluation of online sources as a democratic competence, and gaming and curriculum design. The second day of the Forum began with a keynote lecture by Professor Teresa Elena Ortega, of the Stanford History Education Group. Professor Ortega presented her work on how historical methods can be used in developing digital literacy. A round-table discussion on the consequences of the digital age for history education provided insights from experts from academia and NGOs. The discussion shed light on the newly discovered opportunities to which artificial intelligence (AI) may give rise, as well as its limits. This was followed by a presentation of the General Rapporteur's preliminary insights. Final remarks were given and the Forum was closed by Mr Bernard Wicht, of the Council of Europe Steering Committee for Education, Ms Brikena Xhomaqi, of the European Lifelong Learning Platform, Ms Susanne Popp , of the International Society for History Didactics, and Mr Guðni Olgeirsson, of the Icelandic Ministry of Education.

Opening Remarks

The introductory panel was chaired by Ms Aurora Alincai, Executive Director, Observatory on History Teaching in Europe (OHTE), and remarks were made by Jeroen Backs, Head of Strategy and Knowledge Division, Department of Education and Training, Flemish Community of Belgium, Mr Benjamin Van Custem, Director of the Pedagogical Coordination Unit on Democracy or Barbarism of the Ministry of the Wallonia-Brussels Federation, Ms Marta Markowska, policy officer at the Digital Education Unit of the European Commission's Directorate General for Education, Youth, Sport and Culture, and Mr Matjaž Gruden, Director of Democratic Participation, Council of Europe. Mr Jeroen Backs welcomed all the participants and emphasised the importance of school history curricula given the current challenges in Europe. Mr Benjamin Van Custem talked about history education in the digital age and the development of responsible citizenship. He also pointed out that we are facing new challenges – there is conflict between digital tools and history teaching on the one hand, and historical research on the other. Nonetheless, new technology could be seen as a real opportunity to further democratise and popularise history. Digital readiness and equipping young people with digital skills, which lies at the core of the European Commission's work on digital literacy (launched in 2022), was one of the focuses of Ms Marta Markowska's remarks, along with the importance of history education, which gave students the means to explore the facts and distinguish facts from fiction. Ms Markovska highlighted the importance of helping educators to develop a pedagogical approach which used digital tools. In conclusion, she pointed how timely the topic of the Forum was and said that there was a need to focus on proposing ethical guidelines for digitalisation processes. Mr Matjaž Gruden focused on the ways in which history could be distorted and weaponised, and how technological development could help to protect history education. In conclusion he talked about how history learning was being influenced by social networks and bots, and pointed out that history was never ending.

Keynote lecture "History Education in the Digital Age: A Critical Perspective"

After the official opening of the Forum, the work continued with a keynote presentation by Dr Frédéric Clavert, from the University of Luxembourg. He discussed history in an era of networks, data and cognitive degradation. The main focuses of his talk were the position of history as a discipline, how historians are evolving within a precise social, political and technological context and the differences between datafication and digitalisation and their impact on history. He also talked about the challenges history must meet in the digital age including the democratisation of history, revising the old primary sources through digitalisation (newspapers are the most digitalised primary sources), the social construct underlying all data (our choices influence how we see the past), exploring new sources (examples of social media), discrete digital practices (taking photos of documents in archives) and ultimately, how to teach history in a digital world. In conclusion, Dr Clavert pointed out that basic historical skills are still valid and highlighted the importance of primary sources, historical methodology and reading.

Panel discussion on "Video Games and History Education"

The first panel discussion on Video games and history education was chaired by Mr Villano Qiriazi, Head of the Education Department of the Council of Europe. The panellists were Dr Vit Šisler, Assistant Professor of New Media Studies at the Institute of Information Studies and Librarianship of Charles University's Faculty of Arts in Prague, Mr Elias Stouraitis, EUROCLIO, Dr Esther Wright, lecturer in digital history at Cardiff University, and Mr Petr Franc, of the Organising Bureau of European School Students Unions (OBESSU). The panel explored the integration of video games into history education and the related pedagogical approaches. The main focus was on "historical" video games and how they are connected with curricula. Another aspect highlighted by the panellists was the need to avoid traps, how to address accuracy in video games which centre on certain historical events, and how video games connect formal and informal learning.

Mr Qiriazi presented the work by the Council of Europe on video games in education and talked about the complexity of this medium, and the potential risks and opportunities that came with it. The book "Education for a video game culture: A map for teachers and parents" has generated pedagogical reflection about the role of video games as a cultural tool which provides opportunities but also entails potential risks. In his presentation on "Teaching history with video games" Mr Šisler presented Attentat 1942, a game centring on World War II seen through the eyes of survivors. The main principles of the game producers were authenticity, multiperspectivity, inclusiveness, and contextualisation. Mr Šisler said that video games with historic themes have become one of the most widespread trends in the video games industry, but they pose certain challenges: in war games, war is romanticised and selective realism is deployed (games have to be designed in a way to avoid difficult decision making).

Mr Stouraitis's presentation on "Using historical video games in the classroom" focused on the distinction between commercial and serious games. When using commercial games the emphasis should be on critical analysis of the medium, narratives, the characters and their interaction with the historical context, themes and concepts, encouraging students to refer to historical sources and compare them with game content. Serious games, on the other hand, made use of historical material and instructions with multiple narratives. In addition, Mr Stouraitis described his personal experiences of the process of designing historical games with his students and how this process enabled stronger interaction and participation by the students. In conclusion Mr Stouraitis talked about the level of challenges that teachers face when teaching using video games, how well they should be prepared for the game before implementing it with students and what technical equipment was needed. The presentation by Dr Wright on "Studying historical video games" raised the fundamental question of how we can judge the representation of historical facts in video games (the definition of historical video games given was "games about history, looking either to the past or to the future"). Dr Wright shared her insights about the differences between "history by historians" and "history by developers". Developers often negotiate with historians with regard to the content the video game is inspired by, to make the game more attractive and to "sell" it. Historical video games can be used to foster critical historical literacy and reflect the role of historians in the digital age. Dr Wright concluded her presentation by speaking about the need to promote critical thinking and historical literacy when consuming popular media. Another important aspect was to reinforce traditional research skills and apply them. Mr Franc presented the participants with a learner's perspective. He said that accuracy was a frequent subject of discussion in various online video game groups. Where it came to developing video games with historical content, the hardest aspects to develop in terms of accuracy were models of historical systems, combat methods, everyday interaction and historical events, while material culture, urban spaces, and the topology of battle fields were the easiest. In conclusion, Mr Franc said that gender equality was still a major issue in the video gaming sphere.

Workshops

The afternoon of day one of the Forum was given over to workshops. Plenty of interesting workshops were on offer to the participants, and each working group was made up of a diverse group of forum participants – history educators, history education experts, museum experts, etc. The workshops were held in parallel, meaning that each participant took part in two different sessions.

Workshop 1

The workshop on "How to use digital tools to fight against historical distortion: the project #protect the facts" run by the International Holocaust Remembrance Alliance (IHRA) was presented by Ms Julana Bredmann and Ms Fanny Steckel. They described #protect the facts, its scope, the related social media campaign and more generally, what holocaust distortion was and what the most conspicuous forms of it were in public discourse and social media. Participants shared personal experiences of holocaust distortion taken from practice. The group work and discussion centred on the question of the digital tools that can be used to combat holocaust distortion in an educational context and what was required to support educational activities in this regard. Among the participants' recommendations were to create content for a younger age group, to post on the social media which the younger generation is currently using (such as Tik Tok or Snapchat) and to involve so-called "influencers" who can share the message and have a high public profile.

Workshop 2

The workshop on "ChatGPT and Generative AI as a source in history education" was hosted by Mr Pim Renou and Mr Pieter Mannak. The hosts looked into the hype around Chat GPT, which was mainly found in the mainstream media and was largely negative. They wanted to explore what they could do as history educators with this new tool. They published an article on "Chatting with Napoleon" and were surprised by the massive response. Mr Renou and Mr Mannak gave a brief introduction to Chat GPT and what it is and is not, as well as the difference between "normal" AI and Generative AI (i.e., production of new content based on algorithms of existing texts/images). In the opinion of Pim and Pieter, Chat GPT was already here and there was no way back. There were the known risks of students cheating, but we needed to find a way to help teachers use AI in a helpful way. This was followed by a showcase, comprising a few practical cases of how AI can be used in the classroom with students. These include:

► Having conversations between historical figures

► Creating a "dating profile" of a historical figure

► Conducting interviews with historical figures

► Analysing the causes of an important historical event.

In the workshop, participants were asked to complete an assignment where they were asked to use Chat GPT in combination with a video game (Assassin's Creed: Valhalla), "traditional" pictograms and texts as one of multiple sources to answer the following question: "What was daily life like in Jorvik (York) during the Viking rule (866-1066) for a Viking child/workman/farmer/noblewoman?"

The workshop pointed to some clear limitations of using AI (e.g. when asked about the most important figures in history it came up with men only; answers on the Viking age were often quite generic (e.g. you would have got the same answer if you had asked about everyday life in Ancient Greece…), or that the chat bot tended to make up sources/references). However, crucially, it also showed how it could be a useful and fun addition to traditional teaching methods – and was best used in combination with a teacher who understood what Chat GPT was and what it was not and had some knowledge of the content in question!

Workshop 3

The workshop on "Mediality and the Digital Environment as the Connection to Students' Life-Worlds' run by Mr Vojtěch Ripka hosted 8 participants, most of whom were government representatives, although the group also included teachers, teacher trainers, an NGO representative and a researcher. The workshop focused on means of incorporating more memory-related learning objectives into history studies, especially mediality, while building on the work of Sam Wineburg and the Stanford History Education Group SHEG. Highlighting the two-way interaction between history (as an academic discipline, or as public/popular history) and memory (studies) in influencing each other and how we see the past, the workshop showed how students can gain an increased understanding of mediality. The specific assignments used in the workshop focused on giving students an understanding of the textbook as a medium – and how it could and should be problematised with students. The workshop also highlighted the digital space historylab.cz, where students could discover and work with primary sources while answering questions, sharing the answers and learning facts to take away with their teacher. During the textbook assignments, the participants also discussed why and how changes in how we saw history occurred, i.e., through revisionism or less intrusive changes to what was viewed as insignificant or "outdated" knowledge. The workshop introduced the digital learning environment historylab.cz and participants were invited to complete two assignments related to the role of textbooks. The workshop host also shared some of the reactions from Czech students who had completed the same assignments.

Workshop 4

Ms Marina Kaftan, from Ukraine, hosted the workshop on "History education and disinformation: tackling false narratives." The workshop focused on fake historical information spread via the social media and how it influenced the public's and students' perception of history. Ms Kaftan presented several examples of disinformation campaigns and good practice which countered false narratives that have been used to re-write history. Social media fakes were often accompanied by powerful "evidence" – photos, video, deep fakes. They also included numerous "supporting" facts that could not be checked on the go. Ms Kaftan presented numerous examples of manipulations which had been achieved by avoiding some information or establishing false causations. Social media fakes were spread by groups of fierce supporters, which made proving them wrong more difficult. Another important aspect was that audiences could be micro-targeted. The conclusion was that because of social networks'

ability to influence people's views and feelings about the surrounding reality, they had become one of the most potent means of distorting the perception of daily news, but also events from the past. For instance, social media could be one of the means of spreading forged or distorted historical primary sources.

Workshop 5

The Workshop entitled "A global perspective: A new design of gamification to raise students' motivation to learn – what can we learn for history teaching and curriculum design?" was hosted by Professor Ping-Cheng Yeh, of the National Taiwan University. He shared his insights and experience from working for and with teachers and on how gamification can enhance students' motivation to learn. Through a Q&A session the working group explored how history teaching and curriculum design in Europe could benefit from the approach presented. The examples taken from this practice made it very clear that there was a substantial difference between (history) games and gamification as methodology. Gamification was a generic approach that promoted methodologies to underpin learning trajectories regardless of the subject. Professor Yeh had developed gamification platforms such as PaGamO. Gamification enhanced motivation, inter alia through the competitive aspect but above all by getting learners actively involved in designing their own learning. It could also be used to speed up memorisation, creating more space in the classroom for in-depth discussion. The latter was highly relevant in an Asian context, where history teaching was very much geared to memorising facts. Data showed that female and male students were equally interested in learning via gamification, as opposed to just "video games", which were generally more interesting for boys.

In practical terms it was impossible to develop an endless set of games for each and every subject. Once you passed on to another subject in the classroom, the game relating to the previous subject/chapter became useless. Gamification was a horizontal approach that could be applied throughout the curriculum and the chapters of a particular subject.

The Taiwanese experience showed that it was important to make sure that the gamification platform was easily accessible via a website (not via apps etc.), so that users did not need complicated devices to access it. The social dimension/inclusion that had been introduced in Taiwan had shown that, when gamification was used to support children in rural areas who were educated by grandparents (with low literacy) while parents were working in the cities, the results were very good (there was data proving that scores on exams had improved after use of gamification platforms).

Participants were keen to know what (areas of) policy recommendations could be promoted Europe-wide? The lesson learned in Taiwan was that there was a difference between gamification and just games in education. Another aspect was the benefits in terms of boosting motivation, independent memorisation, reaching out to weaker socio-economic groups and playful introduction to digital literacy/cybersecurity. Teachers played a different role to the one they had traditionally adopted, acting as co-players rather than only as sources of knowledge. The approach or implementation strategy adopted was a bottom-up one. Governments should not impose top-down methods. Responsibility should lie with teachers, schools and learners themselves. Another question that participants were keen to investigate was how this could be linked with education for democracy. In the case of Taiwan, democracy was practised by joining the group of learners via gamification, with no hierarchy between teacher and learners. Furthermore, democratic processes could be "played out" via games, voting, and democratic decision-making. There were benefits to being able to play the game with a huge number of peers. Relations between teachers and learners were less hierarchical, and teachers encouraged students to devise their own learning paths.

Workshop 6

The Workshop on "Critically Evaluating Online Sources as a Democratic Competence", hosted by Ms Maayke de Vries explored the topic of digital citizenship and digital literacy. Using a number of examples (whether plant-based milk is more sustainable than cow milk, BLM protest, a Chinese report about human rights in Europe), the workshop leader began by comparing the similarities and differences in the evaluation of the validity of offline and online sources before showing the students how to approach the review of online sources. In a group break out, participants were divided into groups of three. Lastly, each group discussed certain aspects of digital literacy and presented their conclusions. The participants' main conclusion was that developing digital literacy could positively influence the critical evaluation of historical sources. Furthermore, digital literacy was a skill that was needed not just by students but also by teachers and other experts who had misgivings about their ability to evaluate online sources.

Workshop 7

The workshop on "Teaching History in the Digital Age. A Case in Point: Spain" described a number of measures that had been implemented in Spain to promote the digitalisation of history teaching. Most of the projects devised had promoted the development of various ICT tools and the creation of learning scenarios. Recent research showed that Spanish teachers did not use digital resources enough, especially in higher education. The reasons given for this were frustration with ICT, COVID, and the suitability of modern methodology. Varied and effective good practice examples, shared between teachers, were seen as the solution. A lack of support from the Spanish Ministry of Education was also cited as a problem. Pre-service training in Spain was regarded as the key to developing the digital skills of future teachers. On the other hand, plans to cut back on teacher training courses at university would prevent teachers from gaining sufficient knowledge to promote digital skills.

Keynote lecture "How history methods can be useful for digital literacy"

The second day of the Forum began with a very interesting lecture by Dr Teresa Elena Ortega, Associate Director of the Stanford History Education Group. Her presentation on "How history methods can be useful for digital literacy" focused on the results of the research on historical thinking and civic reasoning. The potential for history as a subject matter to strengthen the digital literacy of students was highlighted and contextualised. Very often students and young people were assumed to be comfortable navigating the digital world. Professor Ortega presented the key takeaways from the study, in which it was found that, if we compared historians, fact-checkers and undergraduate students, the latter group was the worst in determining when an online source was trustable. This raised the question as to how teachers could help students increase their ability to better evaluate online sources. Another part of the research had proved that the pace of change in education was much slower compared to the speed at which the internet developed, and that historical thinking was helpful where it came to evaluating sources online. Digitalisation of archives had opened up space for research. This was seen as positive and gave an opportunity to everyone to do their research. The study had shown that historical thinking was helpful but not enough in itself for proper evaluation of sources. After the presentation, there was discussion and questions from the audience about the concept of "fact checking" that was used throughout the study by the Stanford History Education Group and the role of emotions and values in decision making. It was pointed out that human beings used emotions when making decisions. The question of emotional resilience skills when attempting to separate fact from fiction was also raised.

Round table on "The Consequences of the Digital Age for History Education"

The round table on "The Consequences of the Digital Age for History Education" was chaired by Mr Jean-Philippe Restoueix, from the Council of Europe. The participants, Ms Rūta Kazlauskaite, from the University of Helsinki, Mr Steven Stegers, the Executive Director of EuroClio – European Association of History Educators and Mr Miljenko Hajdarovic, from the Osijek Faculty of Education, discussed the consequences of the digital age for history education, how the digital age was being reflected in classrooms and what specific features of history could be used to deal with digitalisation. Ms Kazlauskaite was a virtual reality (VR) researcher and shared first-hand experience on how this tool could be used to engage students, but also expressed deep concern about the way in which memories from VR tended to be stored alongside real memories. The ethical question raised in the VR sphere was who was creating the content and for what purpose. History as a discipline had a lot of knowledge to share and an interdisciplinary approach to teaching in the digital age was a must. Distancing played a vital role. Mr Hajdarovic stressed that every teacher had different results when using digital technologies while teaching history. The first impact of the digital age was that a lot of content had been digitalised. Now we had to take a step back and think about how to use these digital sources and how to analyse and evaluate them. Mr Hajdarovic pointed out that, as teachers, while we were trying to provoke emotions among students to encourage them to connect with historical content, we should also be careful not to traumatise them. As a first step, teachers should be going through the whole process before exposing the students to certain forms of content. Digital tools were just tools! They were like any other tool that teachers had to hand, and used while teaching. In conclusion, Mr Hajdarovic talked of his personal concern about general literacy: his experience from school was that students' literacy levels were declining, along with their concentration spans. Mr Stegers spoke about students as consumers of history. It was hard to know what they were consuming and what tools there were using to consume historical content – books, TV, movies, video games…. At the same time, consuming history was an individual experience. While this was all very complex, it had a lot of potential, and learning should be individualised much more. On the subject of the pressure being exerted by AI tools such as Chat GPT, and its impact on teaching skills, Mr Stegers pointed out that the world was constantly changing, and people were fearful of this. Historians were ringing alarm bells – we had been in changing situations before and learning from the past could provide the answers and the skills for people to recognise the patterns.

Of the three "participants" on the panel one was Chat GPT, which had received the same set of questions. The answers it had given were relatively usable, and the audience had reacted positively to it. The main challenge posed by the audience to Chat GPT was a request to draw up a lesson plan on the French Revolution. The lesson plan was relatively usable, but when Chat GPT was asked whether it could use the plan itself to give a lesson, its answer was that the teacher could not be replaced.

This response was met with much relief in the plenary room. The general conclusion to this discussion was that we were all facing new challenges. Teachers were not experts on using digital tools for teaching and we were all still learning. The question was how to go about adapting to the use of these tools in our classrooms, the aim being to adjust to and accept digital tools and give guidelines to students on how to use them.

Closing session

The closing session began with a preliminary summary of the forum by Bojana Dujković – Blagojević, General Rapporteur for the Second Annual Forum for History Education from the European Wergeland Centre (EWC).

The last session was chaired by Ms Marie-Ann Persoons, Vice-Chair of the Council of Europe Steering Committee for Education, and included statements by Mr Bernard Wicht, from the Steering Committee for Education of the Council of Europe, Ms Brikena Xhomaqi, from the European Lifelong Learning Platform, Ms Susanne Popp, from Augsburg University and President of the International Society for History Didactics, and Mr Guðni Olgeirsson, Representative of the Ministry of Education, Icelandic Presidency of the Council of Europe.

With regard to the recommendations on the impact of digital education in history teaching, the experts shared interesting views. Mr Wicht argued that digital tools were opening up huge opportunities and new means of motivating students to learn history. Also, teachers were not the only people to teach history in the digital age. The question was how to cope with the huge opportunities and the needs of the classroom, where the teachers were not the only ones with knowledge. Another aspect was the transversal issue of the approach to history teaching – this was now a bit of a mix of everything, which was confusing students. Ministries of Education were at the crossroads when deciding on the level of use of digital gadgets in education. He gave an example of negative reactions from parents when schools asked pupils to bring their own personal IT gadgets (phones, tablets) to school. The parents' rationale was that children were already on their gadgets too much and that at least in schools, they should be free from this. Ms Xhomaqi argued that knowledge was co-creation. Teachers were being challenged to act as creators, but the matter of how to widen the definition of what the classroom was and what a learning environment was in the digital age could be clarified only through discussion by the various

stakeholders, partners, sectors and disciplines. It was possible to look at digital tools as a way to access educational opportunities. In the first instance, we should be investing in people and only afterwards in technologies. The challenge was that policy makers liked technologies more than people. We should embrace and welcome digital opportunities and the value of education, and imagine a different solution for the future of education. Ms Popp's statement focused on concerns about the influence of private companies on what schools were doing to fulfil their public responsibility. She shared her concerns about the need to inform teachers about market situations. Another aspect was that there were now legal rules about what historical interpretation was acceptable for society. This was a new development. It was clear that more time was needed for history education in schools in order to grasp all the critical methods for dealing with history using the new media. Ms Popp also raised the issue of the de-professionalisation of history teaching – more and more people in the education system were teaching history without proper training in history teaching (at least in Bavaria, Germany). Also in Bavaria, research had shown that videos were most frequently used in classrooms, but the main difficulty for students was finding reliable historical sources on the internet (in order to check narratives). Research had shown they were not able to analyse sources critically. Mr Guðni Olgeirsson spoke about the permanent demand that was placed on every Ministry of Education to be constantly expanding their activities. The main question was how new features should be integrated, evaluated and assessed. He argued that the idea of expansion should be challenged. Educational authorities were faced with a need to re-organise education for the future, but the question was how, when the future could not be predicted. There was already strong public commitment (by UNESCO and other international organisations), to the idea that education should not be treated as a market. "So much of our future can be shaped by looking to the past and learning from our mistakes" and if we are lucky, we can have a wonderful future, ended Mr Olgeirsson.

The statements by the panel were followed by questions from and discussion with the audience. The main issues raised were:

- ▶ Interference of private initiatives with education. What was the role of politicians and political systems in the digital age? There was a feeling that teachers were left alone on the "battlefield" but what about public responsibility (government institutions)?

- ▶ In the rapidly changing world, the pre-service level of teacher education was confronted with the problem of how to transfer knowledge very fast, as was needed. Currently, the prevailing impression was that pre-service teacher education could not solve this problem.

- ▶ The Forum had provided practitioners who were already using AI in history teaching with an opportunity to showcase their work. History teacher training, especially pre-service training, could benefit from this, as these practitioners could provide know-how and resources.

- ▶ It was quite clear, after two days of the Forum, that there was no time to wait for the results of scientific research to act on history education in the digital age. There were emerging needs to be met, sooner rather than later.

- ▶ What was the future of history teaching? To what extent was history at risk of being squeezed out by other subjects (as a result of cross-curricular approaches)? Whether history would continue to be an independent subject or it would be merged into the humanities remained an open question and a concern to the participants.

- ▶ There was a fear among practitioners that in the face of digitalisation, history was losing its role.

- ▶ The important question of the distinction between data and algorithms had not been touched on by the Forum. During the discussion, it was stressed that these two should be dealt with separately, as they influenced education differently.

- ▶ As a last point, the participants raised the question of a general vision for education in the digital age. What was the role of education and what was the prerequisite for education, as a public good, to remain in a "healthy" condition and to be accessible to all? – These were questions that needed urgently to be addressed. Similarly, the means of securing a better democratic system which worked for everyone was a matter for everyone involved, namely policy makers, teachers, practitioners, researchers, parents and students.

- ▶ When we could predict what the future would look like, we should accept and embrace digital opportunities and their educational benefits and map out a different solution for the future of education.

Lessons learned

The Second Annual Forum for History Education and the topic of "History Education in the Digital Age" were both very timely. Keynote lectures, presentations, workshops and panel discussion provided a wealth of information on how digital technologies are used in history education across Europe, and about practices. It is clear that a wide range of digital tools and AI have entered the classroom. The participants were presented with a spectrum of opportunities and challenges that these tools were offering. Fear and scepticism about the future of history teaching were reflected in the general discussion. Numerous examples given in the workshops and presentations proved that AI could play a role alongside traditional sources – through text, images, but also historical games. Clearly, there are a large number of unknown factors, but one thing is certain: AI is here to stay.

At the moment, the question remains open as to how far digital technologies have encroached on a sphere where history has always been the leader – namely multiple perspectives. Recognising that AI output depends on what it is fed in helps us to reframe our understanding of the potential. The keynote speaker, Dr Clavert, introduced the concept of datafication, which is the digitalisation of primary and secondary sources converting it into data that can be computed, analysed and interpreted by machines. The choice of what we digitalise also influences the way AI learns history. If data is biased, then AI is biased and in return it influences the way we see the past.

Important lessons learned at the Forum were how history education can help students to develop skills that can help them to navigate the digital age without falling into traps and how to use history education as a set of civic skills. ProfessorIn her keynote lecture Professor Ortega described first-hand experience of ways in which history could be used to strengthen the digital literacy of students. Students were confused about how to evaluate online information despite the fact that young people were often assumed to be most familiar with the digital world. Professor Ortega pointed out that students need help to evaluate the online information affecting them, their communities, and the world. All of this would lead to better informed citizens, able to participate in democracy in a responsible way. This was one of the rationales behind the Civic Online Reasoning project at Stanford University. This raised the question as to how teachers could help students to increase their ability to evaluate online sources. On the other hand, a question that still had to be resolved was where the teachers would get help to develop these skills.

Pre-service and in-service teacher training should rapidly address these needs. The question was how to solve this emerging problem and transfer the knowledge at the right time (i.e. now) to meet the needs identified. The prevailing feeling was that pre-service teacher training would not solve this problem. It was obvious that AI and a whole range of digital tools were already in use in history education in various forms, and policy makers and teacher training could benefit from these experiences. Some form of a network, a space where experiences, tools, educational approaches, methodologies, and lessons learned could be shared, had potential to fill the existing gap in both pre- and in-service teacher training.

History as a discipline has a lot of knowledge to share and an interdisciplinary approach to teaching in the digital age is a must. Digital tools are opening up huge opportunities. There are wide-ranging new means of motivating students to learn history (video games, virtual reality, chatting with historical figures etc.). However, current ethical discussions still focus on the moral standards of individuals. The question is who is creating virtual reality and for what purpose (memories from VR become just as fixed as those from real-life experience) since it is certain that this is influencing how we see the past. How accurate, in terms of historical facts, are video games? These are only some of the implications that have to be taken into account when validating the digital tools used when teaching history. It is undeniable that AI is here to stay. The question is how teachers can be helped to use it in an ethically acceptable way that helps to transform young people into responsible democratic citizens.

Most importantly, education as a public asset, free and accessible to all, has to be secured, now more than ever. One of the main messages from the Forum is that for the first-time, private tech companies are influencing public education to a great and unprecedented extent. It is of the utmost importance to familiarise the educational authorities, educational communities, teachers and parents with this issue and constantly pursue the goal of non-discriminatory, inclusive and free education for all.

Appendix

Day 1 – 7 March 2023

9.00-09.30

OFFICIAL OPENING

Jeroen BACKS, Head of Strategy and Knowledge Division, Department of Education and Training, Flemish Community of Belgium

Benjamin VAN CUTSEM, Director of the Pedagogical Co-ordination Unit on Democracy or Barbarism of the Ministry of the Wallonia-Brussels Federation

Marta MARKOWSKA, Policy Officer, European Commission, Directorate General for Education, Youth, Sport and Culture, Digital Education Unit

Matjaž GRUDEN, Director of Democratic Participation, Council of Europe

09.30-09.40

PRESENTATION OF THE PROGRAMME

09.40-10.40

"HISTORY EDUCATION IN THE DIGITAL AGE: A CRITICAL PERSPECTIVE"

Dr Frédéric CLAVERT, University of Luxembourg

Presentation, questions and answers

10.40-11.10

Coffee Break

11.10-12.45

VIDEOS GAMES AND HISTORY EDUCATION

Panel discussion chaired by **Villano QIRIAZI**, Head of the Education Department of the Council of Europe

Gaming in history education, Attentat 42, **Dr Vit ŠISLER**

Using historical video games in the classroom: **Elias STOURAITIS**, Euroclio

Studying historical video games, **Esther WRIGHT**, Cardiff University (tbc)

A learner's perspective, **Petr FRANC,** European School Students Union, OBESSU

12.45-14.00

Lunch offered by the Flemish Community of Belgium

14.00-15.30

FIRST WORKSHOP*

15.30-16.00

Coffee break

16.00-17.30

SECOND WORKSHOP*

Participants choose two workshops among the following (subjects to be confirmed)
- ► The use of digital tools for education processes when visiting sites of remembrance, **Anne Frank House**
- ► How to use digital tools to fight against historical distortion: the project #protect the facts from the **IHRA**
- ► Artificial intelligence and history: Chatting with Napoleon, a digital reality, **Pim Renou** and **Pieter Mannak**
- ► Mediality and the digital environment s the connection to students life worlds**, Vojtech Ripka**
- ► History education and fake news, **Maryna KAFTAN**, from Ukraine
- ► A **global perspective** – gaming and curriculum design, **Ping-Cheng YEH,** National Taiwan University
- ► Digitalisation and citizenship, **Maayke de Vries**
- ► Teaching history in the Digital Age.Study case: Spain, **Alvaro Chaparro-Sainz**

19.00

Dinner offered by the Walloon-Brussels Federation at the University Foundation, Rue d'Egmont/Egmontstraat 11, 1000 Brussels

Day 2 – 8 March 2023

9.00-10.00

"HOW HISTORY METHODS CAN BE USEFUL FOR DIGITAL LITERACY"

Teresa Elena ORTEGA, Associate Director, Stanford History Education Group
Presentation, questions and answers

10.00-11.15

THE CONSEQUENCES OF THE DIGITAL AGE FOR HISTORY EDUCATION

Round table chaired by **Wayne HOLMES** (tbc)
A critical view from a young researcher: **Rūta KAZLAUSKAITĖ**, University of Helsinki
Artificial intelligence and history education, **Steven STEGERS,** Executive Director, EuroClio
A learner's perspective, a student from ESU
Exploring the metaverse, (tbc)
Promoting the use of digital tools in teaching, **Miljenko HAJDAROVIC**, Faculty of Education Osijek

11.15-11.45

Coffee Break

11.45-12.00

SOME IDEAS FROM THE RAPPORTEUR

Ms Bojana DUJKOVIC BLAGOJEVIC, European Wergeland Centre

12.00-13.00

CONCLUSIONS BY THE DIFFERENT STAKEHOLDERS.

Steering Committee for Education, **Bernard WICHT**
International perspective, **Hilligje VAN'T LAND**, International Association of Universities
Brikena XHOMAQI, European Lifelong Learning Platform
Susanne POPP, Augsburg University & President of the International Society for History Didactics
Representative of the Ministry of Education, Icelandic Presidency of the Council of Europe

13.00-13.15 CLOSE followed by a light lunch

List of Participants

Preparatory Group

HOLTBERGET	Andreas	EuroClio
TRIBUKAIT	Maren	Leibniz Institute for Educational Media
PERSOONS	Marie-Anne	CDEDU Vice-Chair, Flemish Department of Education and Training (Belgium)
D'ALOISIO	Irena	Walloon-Brussels Federation, Unit on Democracy or Barbarism / Council for the Transmission of Remembrance
ALERCON SANCHEZ	Caridad	The Organising Bureau of European School Student Unions (OBESSU)
General Rapporteur		
DUJKOVIĆ BLAGOJEVIĆ	Bojana	The European Wergeland Centre (EWC)

Experts

Germany	POPP	Susanne	Augsburg University & President of the International Society for History Didactics
Finland	KAZLAUSKAITE	Ruta	University of Helsinki
Czech Republic	SISLER	Vit	Charles University's Faculty of Arts
UK	WRIGHT	Esther	University of Cardiff
Switzerland	WICHT	Bernard	Steering Committee for Education (CDEDU)
Czech Republic	FRANC	Petr	The Organising Bureau of European School Student Unions (OBESSU)
Belgium	XHOMAQI	Brikena	European Lifelong Learning Platform
The Netherlands	STEGERS	Steven	EuroClio
Germany	BREDTMANN	Julana	International Holocaust Remembrance Alliance (IHRA)
Germany	STECKEL	Fanny	International Holocaust Remembrance Alliance (IHRA)
Croatia	HAJDAROVIC	Miljenko	Faculty of Education Osijek
Keynote speakers			
Luxembourg	CLAVERT	Frederic	University of Luxembourg
USA	ORTEGA	Teresa Elena	Stanford History Education Group

Participants

Albania	DAUTAJ	Astrit	
Armenia	MANUKYAN	Suren	
Austria	STEININGER	Sigrid	
Bosnia and Herzegovina	TOMICIC	Danijela	Zavod za školstvo Mostar
Canada	SCHUPACK	Igor	
Cyprus	GEORGHIOU LOIZOU	Antonia	
Estonia	OJA	Mare	
	YOUNG	Hannah	EUROCLIO
	HEESEN	Marian	EUROCLIO
	RADULOVIC	Igor	EUROCLIO
	FITZSIMONS	Sinead	EUROCLIO
	VAN LEEUWEN	Daan	EUROCLIO
	TOTH	Judit	EUROCLIO
	RIPKA	Vojtech	EUROCLIO
	GARGIONI	Stefania	EUROCLIO
	DE VRIES	Maayke	EUROCLIO
	CZETWERTYNSKA	Aleksandra	EUROCLIO
	NAULAINEN	Madli Maria	EUROCLIO
	MATKOVIC	Matej	EUROCLIO
	ACKERMANN BOEROS	Ute	EUROCLIO
	ZAAGSMA	Gerben	EUROCLIO
	GILA	Cristina-Iulia	EUROCLIO
	STOURAITIS	Elias	EUROCLIO
	KAFTAN	Marina	EUROCLIO
	RENOU	Pim	EUROCLIO
	MANNAK	Pieter	EUROCLIO
	LLULLA	Anjeza	EUROCLIO
Georgia	KHANJALIASHVILI	Eteri	
Germany	MORTENSEN	Susanne	
Greece	SOTIROPOULOS	Dimitris	
Holly See	PATRIARCA	Giovanni	
Hungary	ROZSA	Gabor	
Hungary	MARUZSA	Zoltan Viktor	
Iceland	OLGEIRSSON	Guoni	
Ireland	LANDERS	Vincent	
Luxembourg	VOLZ	Dajana	
Luxembourg	DEVE	Steve	
Montenegro	ARANITOVIC	Lazar	
North Macedonia	TALEVSKI	Filip	
Portugal	DA CRUZ ELEUTERIO	Sonia	

Portugal	PEREIRA	Maria Paula	
Portugal	PEREIRA HENRIQUES	Raquel	
Romania	BOSCODEALA	Felicia Elena	
Romania	CAPITA	Carol	
Serbia	SUICA	Hana	
Serbia	MARKOVIC	Predrag	Ministry of Education
Slovak Republic	VARGA	Juraj	
Slovenia	SNOJ	Damjan	
Spain	CHAPARRO-SAINZ	Alvaro	
Turkey	BOZKURT	Abdurrahman	
Turkey	KIZILTEPE	Firat	
	BACKS	Jeroen	Flemish Department of Education and Training
	VERHAEGEN	Ann	Flemish Department of Education and Training
	DEJAEGHERE	Ann	Flemish Department of Education and Training
	KERKHOVE	Wouter	Flemish Department of Education and Training
	DU CHAU	Jan	Flemish Department of Education and Training
	DE KNIJF	Soetkin	Flemish Department of Education and Training
	BUYLE	Daya	Flemish Council for Education (VLOR)
	VERMEERSCH	Jens	Flemish Community Education
	CHEN	Yuwen	Taipei Representative Office in the EU and Belgium
	VAN DE PAER	Kelly	
	YEH	Ping-Cheng	National Taiwan University
	MARKOWSKA	Marta	European Commission
	VAN CUTSEM	Benjamin	Ministry of the Walloon-Brussels Federation
	WALTERS	Caroline	Special Committee for Remembrance Education (Flanders)
	ROELS	Bart	"Digisprong" the Flemish Knowledge Centre for quality digitalisation in education

Council of Europe

GRUDEN	Matjaz	CoE
AILINCAI	Aurora	CoE
QIRIAZI	Villano	CoE
RESTOUEIX	Jean-Philippe	CoE
TREHARNE	Gareth	CoE

Historical Thinking and Civic Online Reasoning

Teresa Elena Ortega Stanford History Education Group

Young People Are Unprepared to Evaluate Digital Content

Despite the large amount of time students interface with the digital world (Pew Research Center, 2022; Common Sense Media, 2022), young people struggle to make sense of the information they encounter there. In the largest study of its kind, the Stanford History Education Group (SHEG) measured students' ability to evaluate online sources (Breakstone et al, 2021). The results should give pause to anyone who believes an informed citizenry is imperative for healthy democratic systems.

Students were asked whether a video posted to social media from an account called "I on Flicks" that claimed there was voter fraud in the 2016 American Democratic Party's primary elections provided strong evidence. Fifty-two percent of students concluded that it was. As one student wrote, "Yes, it shows video evidence of fraud in several stats at multiple different times." The video in question, however, does not show voter fraud in an election in the United States.

Instead, the video comes from Russia, something easily learned from a quick internet search (Murray, 2016). Only 3 of the over 3,000 students in the study identified the video's origins. Of the half of students who answered that the video did not provide strong evidence to support its claim of voter fraud, many still failed to question the source of the video and instead took it at face value (Breakstone et al, 2021). "The video only shows a few specific instances, and is not enough to blame the whole Democratic party of voter fraud" provides an example of this common flawed reasoning.

Responses to another task in the study revealed that two thirds of students could not distinguish between ads and news stories online. When presented with a screenshot of the homepage of Slate, a credible American news outlet, most students were able to identify the traditional advertisement. However, a large majority failed to identify the native advertisement as such, despite the words "sponsored content" that appeared on it. One student wrote, "The purpose [of the sponsored content] is not to try to lure people to use a website/product. It is just an article on reasons women don't go into technology." Many students provided similar answers.

As this study demonstrates, technology has outpaced education. Students and teachers have heretofore been inadequately prepared and supported in this domain. As a first step towards a necessary educational response, SHEG conducted another study to identify what constitutes expertise in online reasoning (Wineburg & McGrew, 2019).

Historical Thinking Is Helpful But Insufficient for Evaluating Digital Content

Members of SHEG observed how three groups evaluated online content:

(1) Ten university-based historians, that is, professionals with doctorate degrees who evaluate sources as a central part of their research;

(2) ten professional fact checkers at the United States' top news outlets who verify information for news reports and operate under strict journalistic standards;

(3) twenty-five Stanford undergraduate students, young people who grew up using digital devices and attend a highly selective university located in the heart of Silicon Valley. Professional fact checkers significantly outperformed the historians and students on seven of the eight tasks in the protocol. On a single task, historians and fact checkers performed similarly and significantly outperformed the students. An examination of that single task follows.

Task 1: Margaret Sanger

We observed how the study participants approached the following task: "Some people have claimed that Margaret Sanger, the founder of Planned Parenthood, supported euthanasia. Spend up to 8 minutes and use any online resources to help you decide if you think this claim is true" (McGrew, 2021). Participants were not allowed to use academic databases. On a three- point rubric to rate the quality of participants' performance, where those who found credible sources and verified the source's credentials received a 2, fact checkers earned a mean score of 1.56 (SD = .53), historians 1.14 (SD = .90), and students .36 (SD = .56). A Kruskal-Wallis nonparametric analysis of variance showed no significant difference between fact checkers and historians (p = .37).

If you search for Margaret Sanger and euthanasia, as our participants did, you may quickly ascertain that you are researching a question that is highly politicized. The first few results would likely include a series of websites that advocate against abortion and contraception access. In the study, the website LifeNews typically appeared as the first search result for participants. This website bills itself as "The Pro-Life News Source" and conflates contraception, abortion, eugenics, Nazism, and euthanasia, arguing that Sanger was a "purveyor of death" (Novielli, 2014).

By and large, Stanford students immediately clicked on the first or second result present on the search engine results page, often LifeNews, and proceeded to accept as valid the information and supposed evidence that LifeNews presented (McGrew, 2021). One student described the site as "sketchy" yet still believed the information it presented about Sanger was credible because it provided an "actual picture." She did not question where the picture came from, whether it was authentic, whether it was sufficient evidence to support the claim, or how the website characterized the euthanasia Sanger supposedly supported. To this student, the mere appearance of evidence validated the website's claims. She was not unique in her group. Indeed, most of the Stanford students made decisions about what to trust based on the veneer of evidence and did not evaluate the website that presented it.

Historians and fact checkers brought different content knowledge and expertise to the task, yet they approached the task in a similar way. They outperformed the Stanford students

because they demonstrated an understanding that evidence never stands alone. They did not trust the veneer of evidence because they understood that evidence cannot be evaluated independently of its context.

To contextualize the claim being made, the historians and fact checkers strategically used the search engine results page. Because they were oriented toward finding reliable sources, selecting from the results page was one of the most critical decisions they made over the course of the task. They practiced *click restraint:* Resisting the impulse to immediately click on the top result of a search engine page to instead make an informed choice of what to click. The historians and fact checkers looked at over five times the number of search results that the students did, on average. Given the constraints of the tasks, the professionals reasoned that their best bet in a short amount of time was to search for a source they trusted to accurately represent historical evidence, even if it required going to the second or third pages of their search results.

While sifting through the search results, the historians and fact checkers took bearings of the information neighborhood they landed in by using the URL and snippets of the sites listed in the search results, passing over the sources they deemed as lacking authority and opening the ones that they judged more trustworthy. By practicing click restraint to contextualize the historical claim about Sanger, professionals located and consulted credible sources, such as the Margaret Sanger Paper Project, an archival collection at New York University, and a digitized version of historian Ian Dowbiggin's book *A Merciful End: The Euthanasia Movement in Modern America,* in which Dowbiggin argued that Sanger was a member of the Euthanasia Society of America but did not support euthanasia for population control. From their skillful searches, historians arrived at nuanced and accurate conclusions, for example:

My ultimate conclusion from this is that Margaret Sanger probably was connected to people who were thinking about … end of life issues. People who are suffering … or have no discernible consciousness. … I guess it depends on how you define euthanasia.

… It kind of fits with her idea of giving people control and power over their own bodies. By slowing down on the search engine results page, the professionals were able to contextualize the claim about Sanger and euthanasia and consult trustworthy sources, all still within the 5- minute time limit.

Historians' way of thinking about historical information and sources, namely, their disciplinary impulse to contextualize information, led them to practice click restraint, thereby locating higher quality information and arriving at more accurate conclusions than the Stanford students. Yet on the other seven tasks of the study protocol, which were not directly related to historical claims and sources, the fact checkers significantly outperformed both the students and historians.

Task 2: MinimumWage.com

In the same expertise study, SHEG researchers presented the participants with a webpage from minimumwage.com and told them to spend up to 5 minutes evaluating it as a source of information about the minimum wage, using any online sources to help in their evaluation (Wineburg & McGrew, 2019). Minimumwage.com is a project of the Employment Policies Institute (EPI), an official-sounding organization with a slick-looking website that has a .org URL, a clean logo with its name, and clear places to look for research and to learn more about the organization. The "About" page says that it's a non-profit organization that sponsors research at major universities. The research page features an impressive list of reports. If you were trusting what this website reports and signals about itself, through things like its aesthetic links to reliable sources, and the language on its "About" page, you would likely conclude that the Employment Policies Institute is reliable. The problem is that EPI is not a think tank. Instead, EPI and minimumwage.com are run by the public relations firm Berman and Company, which has worked on behalf of the hotel and restaurant industries (Lipton, 2014).

All the fact checkers linked EPI to minimumwage.com in less than a minute without prompting (Wineburg & McGrew, 2019). Historians took nearly four times as long, and 6 of the 10 had to be prompted to find EPI. Students took even longer, at an average of 5 minutes and 18 seconds, and the large majority needed prompting to do so. Furthermore, every fact checker concluded Berman and Company sponsored EPI and minimumwage.com, but only 6 historians did, and those who did discover this connection took nearly twice as long as the fact checkers. Only 40% of students linked minimumwage.com to Berman and Company, and they took even more time.

The key to the fact checkers' success is what we have coined *lateral reading:* Leaving an unfamiliar site and opening new tabs to check what trusted sources had to say about the initial source. By reading laterally, fact checkers avoided being taken in by the signals of reliability that a website tried to send about itself and, instead, took advantage of one of the web's strengths—its abundance of interconnected information. By leaving the site, they learned about its connections to the hotel and restaurant industries—something they would never have learned if they stayed on the site itself. In the digital environment, it makes sense to rely on resources of other websites to learn more about one. In contrast, Stanford students and historians tended to say within sites, reading vertically and drawing conclusions about the site based on clues they found within it.

They learned far less about the website's sponsors as a result.

We observed fact checkers using various types of credible websites in their lateral reading, among them, academic sources, reputable news outlets, and, though often villainized, Wikipedia. Fact checkers demonstrated strategies for using the English Wikipedia wisely, such as scrolling to the references section at the bottom of articles to mine for trusted sources on the topic at hand. Wikipedia proved to be a useful tool for getting a general overview of a topic, as well as a jumping-off point for further investigation.

Lateral reading works on sources related to disparate contemporary and historical topics and explains the difference in historians' and fact checkers' performances. On the seven of eight tasks that placed historians outside their realm of disciplinary familiarity, they struggled. Fact checkers, by contrast, performed the best on all the tasks, each on a different subject. Though historians routinely had a disposition to think about where a source might come from, they often lacked the know-how to find out, or at least how to do so efficiently on a range of topics. They did not know to laterally read.

Taken as a whole, fact checkers' performance on the protocol revealed a disposition towards attention conservation. By employing click restraint and lateral reading, fact checkers reduced the time spent on low quality sources and conserved their attention for more authoritative sources. In the digital environment, where there is an overabundance of sources rather than a scarcity, attention conservation is crucial for optimizing time spent verifying claims and evaluating sources.

Civic Online Reasoning Curriculum

Having identified skills that fact checkers used to evaluate online information, SHEG set out to design a curriculum based on them. We coined our work in this domain Civic Online Reasoning: The ability to search for and evaluate social and political information online. In a study conducted across an urban school district, we tested how students whose teachers had received professional development in Civic Online Reasoning and who taught six of our lessons compared to a control group and found that students in the Civic Online Reasoning classrooms grew significantly in their ability to judge the credibility of digital content (Wineburg et. al, 2022). Our dozens of lessons and assessments are free to anyone with an internet connection on the Civic Online Reasoning website (https://cor.stanford.edu/).

Implications for History Education

History classrooms should be places where students learn not just to analyze historical sources, but where students practice historical thinking skills that they

can use in contexts outside the history classroom as well (Wineburg, 2001)—for example, to help them evaluate information on current events. Many scholars and educators have made a compelling case for this benefit of historical study. But in the new landscape of online historical research, in which students ask search engines questions more often than librarians, and social media algorithms, not archive boxes, serve students content, historical reasoning alone is insufficient. And yet, there are clear confluences between historical thinking and Civic Online Reasoning.

Contextualization can be a strong base upon which to build the skill of click restraint and to develop the habit of taking bearings in an information ecosystem. Sourcing and corroboration are strongly implicated in lateral reading. And by practicing attention conservation, students can then delve into closely analyzing content that is worth their time. In a small design study, McGrew (2022) worked with an 11th grade high school teacher to embed Civic Online Reasoning in his U.S. history class and found students performed better on Civic Online Reasoning measures in a posttest.

Furthermore, unless we integrate Civic Online Reasoning within the main disciplines, it will remain marginal, something perhaps taught one day at the start of a research unit, rather than something deeply embedded within curricula that gives students repeated practice throughout the school day and year (Breakstone et al, 2018). And so, in addition to offering a bank of discipline- neutral classroom materials, SHEG has begun to develop discipline-specific lessons and assessments, including for history courses (https://cor.stanford.edu/curriculum/collections/cor-for-the-history-classroom).

University of Connecticut professor Michael Lynch has called the internet "both the world's best fact checker and the world's best bias confirmer—often at the same time" (Lynch, 2016). Increasingly, the internet is also where students learn about the world, both past and present. In the face of mounting historical misinformation and disinformation online, we need a research-supported educational response to support educators and students in sorting fact from fiction.

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History education in the digital age: a critical perspective

Frédéric Clavert

Introduction

We live in a precise social, political and technological context, made of networks, data and cognitive delegation to the machine. Historians are no exception: we do not live outside of the world. Nevertheless, doing history in a world where computing assumes a greater role is not exactly new – it is in fact a rather old challenge. In 1959, the French historians Adeline Daumard and François Furet, dealing with notarial archives, used what was still called in French "mécanographie"[1], to process a corpus that they considered too massive to be efficiently read by humans only[2]. A few years later, in the *Annales ESC* too, the archeologists Paul Garelli and Jean-Claude Gardin crossed two databases to study the Assyrian settlements in Cappadocia[3]. Two of the bases of our datafied world are in those two articles already settled: dealing with massive data (of the time) and crossing datasets to create new information. The rise of computing, networks and data and its influence on how we write historical outputs is hence more than half a century long.

We will insist on datafication, as it is dealing with what is at the core of the writing of history: primary sources and how to analyse and interpret them to answer a question about the past. What is datafication?

> "To datafy a phenomenon is to put it in a quantified format so it can be tabulated and analysed[4]."

Datafication is more than digitization: it is the transformation of digitized (and born digital) material into data that can be computed and hence analysed. But it is also the (criticable) ideology that data can represent better the society (or the past) than analog (traditional) interpretations.

This process of our societies' datafication started far before 2000, as the two articles in the *Annales ESC* proves it, but it speeded up thanks to the combination of several phenomenon: the rise of personal computing in the 1980s, of the internet and the web in the 1990s, the apparition of social media as we now know them as well as the platformization of the web (which generates big data) since the 2000s and the rise of AI – or this branch of AI that we call machine learning and includes deep learning – since the 2010s (even though the bases of machine learning and even deep learning are older).

Some historians seized those evolutions from the very beginning. More recently, the emergence of *Digital Humanities* (and Humanities computing before) and of *Digital History* since the 2000s mark a phenomenon of generalization of the use of digital tools in Humanities and Social Sciences, including history. The use of AI-derived tools are, for a decade, a strong trend of digital humanities and history. For instance, the *himanis* project that digitized the *Trésor des Chartes*[5] partly relies on machine learning. The more and more famous *Transkribus*[6] – an optical character recogintion software made for historical documents, including handwritten ones – is also based on AI. Furthermore, and sometimes without knowing it, more and more historians are using AI-powered applications or devices, from topic modelling to the use of smartphones in the reading rooms or archive centres.

1. The French word for computing, "informatique" – insisting on the automation of information processing –, was coined in 1962.
2. François Furet et Adeline Daumard, « Méthodes de l'Histoire sociale: les Archives notariales et la Mécanographie », *Annales ESC*, 1959, vol. 14, n⁰ 4, p. 676-693.
3. Paul Garelli et Jean-Claude Gardin, « Étude Par Ordinateurs Des Établissements Assyriens En Cappadoce », *Annales ESC*, 1961, vol. 16, n⁰ 5, p. 837-876.
4. Viktor Mayer-Schönberger et Kenneth Cukier. *Big Data: A Revolution That Will Transform How We Live, Work, and Think*, Boston, Houghton Mifflin Harcourt, 2013 p. 72.

5. http://himanis.huma-num.fr/app//
6. https://readcoop.eu/transkribus/

The seizing of digital tools by historians, in France and elsewhere in Europe and the world[7], led to the hard questions of historians' computing skills. This was discussed – in France, considered here an example – as early as the end of the 1970s, for instance among medievists. How to teach computing to young future historians? The same question is still asked in 1986 by Jean-Philippe Genet, in the at that time young journal *Histoire & Mesure*[8] and again during the early 1990s, this training being then considered an "emergency"[9]. Almost 20 years later, still in the French context, the question is still debated[10]. In 2019, the *Digital Humanities à l'Institut Historique Allemand* conference discussed it again – including with an intervention of this article's author[11].

This still going on debate on the teaching of digital skills to future historians comes with a more profound phenomenon: the rise of digital history.

The rise of Digital History?

The emergence of important digital history projects since the 1990s such as the *Valley of the Shadow* project or even the 1978 Kleio project led by Manfred Thaller cannot be separated from other phenomenons: the datafication of primary sources and the platformization of the web.

Indeed, the mass digitization of primary (and secondary) sources, together with cheap computing (the birth of the personal computer in the 1970s) and the creation of the Internet, led historians – or, rather, some of them – to do a transition from primary sources (*i.e.* "analog" – paper, silver-based films, etc) to dataset when defining their field. Some of them even speaks about "big data of the past" – when your personal computer has not enough computing power to process a dataset made of digitized (or born digital) primary sources. For instance, the digitization of newspapers transformed fundamentaly how we process and question this source[12] as we can now, for instance, trace precisely the circulation of information in the XIXth Century.

But digitization is not the only source of the *big data* of the past. The platformization of the web – the focalisation of online services, starting with search engines and social media, around a few websites such as Google or Facebook – is leading to the massive production of new primary sources, such as tweets or facebook posts.

This situtation implies new challenges in many domains of importance to the writing of history: preservation, democratization of artefacts of the past and reading. As Roy Rosenzweig noted it as soon as 2003[13], many online sources are not archived and/or are fragile. For instance, websites that used to play an important role in the the first decade of the web have disappeard – such as the French homepage service mygale.org – or were saved *in extremis* like GeoCities[14]. Social media are barely archived – with the notable exception of Twitter which signed an agreement with the Library of Congress, though this archive is not yet accessible[15]. Facebook is not archived, or rather self-archived. Myspace has deleted a large part of the content of its first years of existence.

This preservation issue is at the centre of the web archive community, that comprises notably the many institutions which are members of the International Internet Preservation Consortium and the archiving of the web is today better than it never was. Indeed, when Roy Rosenzweig wrote his article, the Internet Archive, a US non profit, was among the few institutions that very partially attempted at preserving the web. Today, losses are nevertheless still to fear, includng in case of war, as the Russian agression against Ukraine has shown despite the many efforts of initiatives such as the *Saving Ukrainian Cultural Heritage Online*.

Preservation, though, is not the only challenge posed to the historian in the digital era. Democratization of history is another one: with free and easy access to many primary sources online, some have believed that "everyone's a historian"[16]. But the democratization of access to primary sources does not guarantee that citizens have the intellectual tools to make the reading of a primary source an experience of the past. In many ways, the rise of *public history* since the 1970s is also linked to this phenomenon.

7. For non-French examples, including from the US and UK, but also from Northern Europe and Eastern Europe, even before 1989, see: Hannu Salmi, *What Is Digital History?*, 1st edition, Medford, Polity, 2020.
8. Jean-Philippe Genet, « Histoire, Informatique, Mesure », *Histoire & Mesure*, 1986, vol. 1, p. 7-18.
9. Jean-Philippe Genet, « La Formation Informatique Des Historiens En France: Une Urgence », *Mémoire vive*, juin 1993, nº 9.
10. Émilien Ruiz et Franziska Heimburger , « Faire de l'histoire à l'ère Numérique : Retours d'expériences », *Revue d'histoire moderne et contemporaine*, 2011, n 58-4bis, nº 5, p. 70-89.
11. Institut historique Allemand, Paris « Enseigner le numérique aux historiennes perspectives internationales #dhiha8 ». https://dhiha.hypotheses.org/2619.
12. Estelle Bunout, Maud Ehrmann et Frédéric Clavert (eds.), *Digitised Newspapers A New Eldorado for Historians? Tools, Methodology, Epistemology, and the Changing Practices of Writing History in the Context of Historical Newspapers Mass Digitization*, 1. Auflage., Berlin, De Gruyter Oldenbourg, 2022.
13. Roy Rosenzweig, "Scarcity or Abundance? Preserving the Past in a Digital Era", *The American Historical Review*, juin 2003, vol. 108, nº 3, p. 735-762.
14. Ian Milligan, "Welcome to the Web: The Online Community of GeoCities during the Early Years of the World Wide Web" dans Niels Brügger et Ralph Schroeder (eds.), *The Web as History: Using Web Archives to Understand the Past and the Present*, s.l., UCL Press, 2017,.
15. Library of Congress, "White Paper: Update on the Twitter Archive at the Library of Congress".
16. Stephen Mihm, *Everyone's a Historian Now – The Boston Globe*, s.l., 2008.

Last but not least, historians need to read their primary sources, which requires a computer when a single collection of digitized newspapers from the XIXth century, a corpus of webarchives or several million tweets each amount to several terabytes. As it is not humanly possible to read everything in those cases, historians need to ask their computer to read for them: it it the basis of what is today called distant reading[17]. Though in its initial definition, distant reading implied to stop reading (humanly) all sources, we are heading towards scalable reading[18] – a way to mix close reading (historians' traditional ways to read primary sources), machine assisted reading (a machine-enhanced version of close reading: with automatic search feature for instance) and distant reading (algorithmic reading).

Revisiting old primary sources through digitization

One of the main elements explaining why digital history is getting important are programs of massive digitization of primary sources. The paradigmatic example is probably the "datafication" of ancient – published before the before the second world war – newspapers.

This digitization of newspapers[19] happened while a renewal of the historiography of media was going on. But the digitization itself also changed the nature of newspapers as a primary source for historians. As a consequence, numerous large-scale projects dealing with distant reading or scalable reading of newspapers: Oceanic Exchanges, Numapresse, NewsEye. Though each of them have specificities in terms of geographic scale or time scale, all those projects have as an aim to transform digitization of newspapers into their datafication.

Let's develop the example of the Swiss *Fonds national de la recherche* (FNS) funded project *Impresso. Media Monitoring of the Past*[20]. A cooperation between the Digital HUmanities Lab at the EPFL, the Institute of Computational Linguistics at the University of Zurich and the C2DH at the University of Luxembourg, *Impresso* had as objectives to allow a better use of digitized anewspapers collection:

> "recent progress in text analysis has also opened up new possibilities for conducting research on historical text collections. Opportunities include enhanced analysis capacities, with the possibility of automatically exploring the content of newspapers with an unprecedented combination of speed, depth and volume; a wider scope, with the ability to conduct comprehensive studies
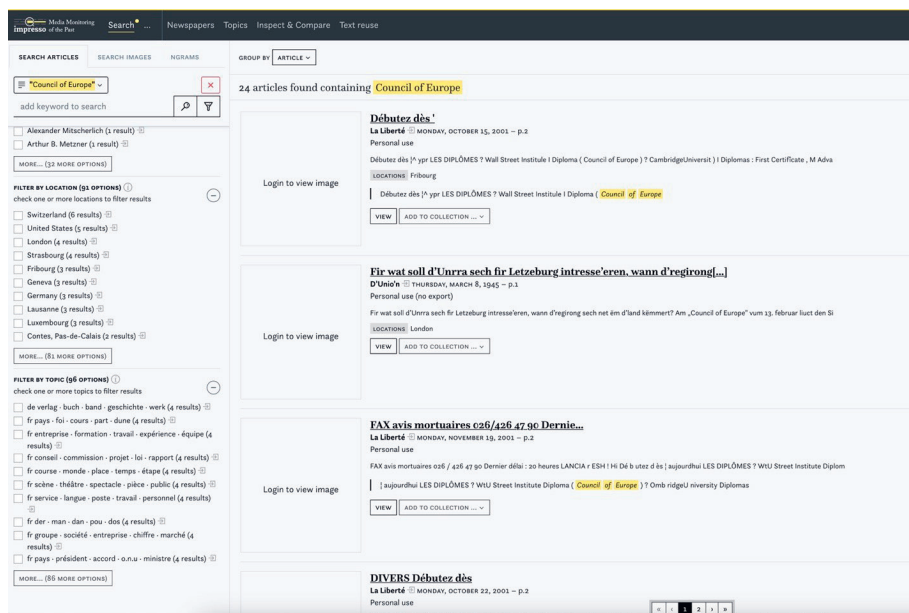

Figure 1 : Impresso project's interface

17. Moretti Franco, *Graphs, Maps, Trees: Abstract Models for Literary History*, Verso, 2007.
18. Clavert Frédéric et Fickers Andreas, "On pyramids, prisms, and scalable reading", Journal of Digital History (jdh001), 2021. En ligne: https://journalofdigitalhistory.org/en/article/jXupS3QAeNgb.
19. Another domain where digitization has the pontential for a dramatic change in the current historiography are parliamentary debates. See for instance: Marie Puren et Aurélien Pellet, « Explorer les débats parlementaires français de la Troisième République par leurs sujets ».
20. One of its major printed output is E. Bunout, M. Ehrmann et F. Clavert (eds.), *Digitised Newspapers A New Eldorado for Historians?*, op. cit.

by comparing and contrasting viewpoints; and greater continuity, with the option of considering the entire lifespan of newspapers or collections of newspapers in a single study. This project explored the possibilities raised by these new techniques." Project Objectives. More interesseingly, the Impresso-project has attempted at developping an interface that allows scalable reading with no code skills.

What all those projects – whether dealing with newspapers collections or other kind of digitized primary sources collections – aim at is to allow historians to deal with the big data of the past. As all kind of data, big data (of the past or not) is a social construct[21] – in other words what is digitized and what is not is the result of choices and those choices will influence how historians work in the near future.

One of the danger of digitization of primary sources is the "lamp-post effect" ("syndrôme du lampadaire" – an expression often used by French historian Claire Lemercier)[22] – the risk of writing the history that can be written based on the primary sources that are digitized and to ignore what is not digitized. In a famous article, Ian Milligan described how canadian historians quoted more often newspapers that were digitized over those that weren't, which, at the time of Milligan's article, meant ignoring not only French-speaking canadian points of view but also local english or French speaking newspapers. If the digitization of French speaking canadian newspapers has since then caught up, Milligan's study remains one of the best-example of the lamp-post syndrom[23]. At the same time, historians may have the impression that browsing massive and well-organized databases gave them access to all the primaray sources they could have access to: Milligan called this phenomenon the "illusionary order".

The use of large, massive datasets – big data – is strongly linked to the use of artificial intelligence algorithms. Today, AI, such as it is used by digital history, is mostly linked to machine and deep learning – when the "machine learns"[24]. Basically, the aim is that the piece of software "learns" from training datasets, and from this learning, machine learning-based pieces of software will be able to analyse – or rather assist an historian, for instance, to analyse – very large datasets. That makes the training dataset quite strategic: if those datasets are biased, then all subsequent analyses based on this algorithm will be biased too.

Beyond enabling (digital) historians to explore in a new way old primary sources, big data, AI and their uses in digital history allow historians to exploit new sources, that are produced by the web and its big platforms.

Exploring new sources: the example of social media

Since the advent of the web and its development around the globe in the 1990s, it became quite clear that the web, itself a documentation system, would become an infinite archive[25]. If developments in archiving the web are today very active – with networks, regular conferences, archive consortium – we will focus here on our work with social media as an example of new sources for historians and more generally for humaniities and social scientists.

From 2014 to 2019, we have used Twitter as a way to sutdy the developments of the Centenary of the First World War – one of the most important series of commemoration that took place under the era of social media. We did not here use any "archive" in the traditional meaning, but collected directly what we wanted to collect, through the free option that existed until the end of June 2023, to connect directly to Twitter.

This allowed us different kind of digital analyses through distant reading of our database: we could understand the global temporalities of the Centenary on Twitter (Figure 2), the language temporalities (Figure 3) – for instance, the 11th of November is a recurring rather French-speaking event –; to look at the content of the tweets through data mining (Figure 4)[26] and we can project the results of this datamining through time (Figure 5)[27].

21. Danah Boyd et Kate Crawford, "CRITICAL QUESTIONS FOR BIG DATA: Provocations for a Cultural, Technological, and Scholarly Phenomenon", *Information, Communication & Society*, juin 2012, vol. 15, nº 5, p. 662-679.

22. Quoted in Caroline Muller, « Les archives à l'ère numérique », 2022. To have a better view on the use of quantitative methodologies in history, see: Claire Lemercier, Claire Zalc et Arthur Goldhammer, *Quantitative Methods in the Humanities*, s.l., The University of Virginia Press, 2019. See also Lara Putnam, "The Transnational and the Text-Searchable: Digitized Sources and the Shadows They Cast", *The American Historical Review*, avril 2016, vol. 121, nº 2, p. 377-402.

23. Ian Milligan, "Illusionary Order: Online Databases, Optical Character Recognition, and Canadian History, 1997-2010", *Canadian Historical Review*, décembre 2013, vol. 94, nº 4, p. 540-569.

24. Yann Le Cun, *Quand la machine apprend: La révolution des neurones artificiels et de l'apprentissage profond*, s.l., Odile Jacob, 2019.

25. Ian Milligan, "Lost in the Infinite Archive: The Promise and Pitfalls of Web Archives", *International Journal of Humanities and Arts Computing*, mars 2016, vol. 10, nº 1, p. 78-94.

26. We use the iramuteq software: https://iramuteq.org.

27. For a detailed analysis, please read my chapter in Léo Dumont, Octave Julien et Stéphane Lamassé, *Histoires de mots. Saisir le passé grâce aux données textuelles*, s.l., Éditions de la Sorbonne, 2023 (to be published in August 2023) in French, Frédéric Clavert, "History in the Era of Massive Data", *Geschichte und Gesellschaft*, 2021, vol. 46, nº 1, p. 175-194 in English.
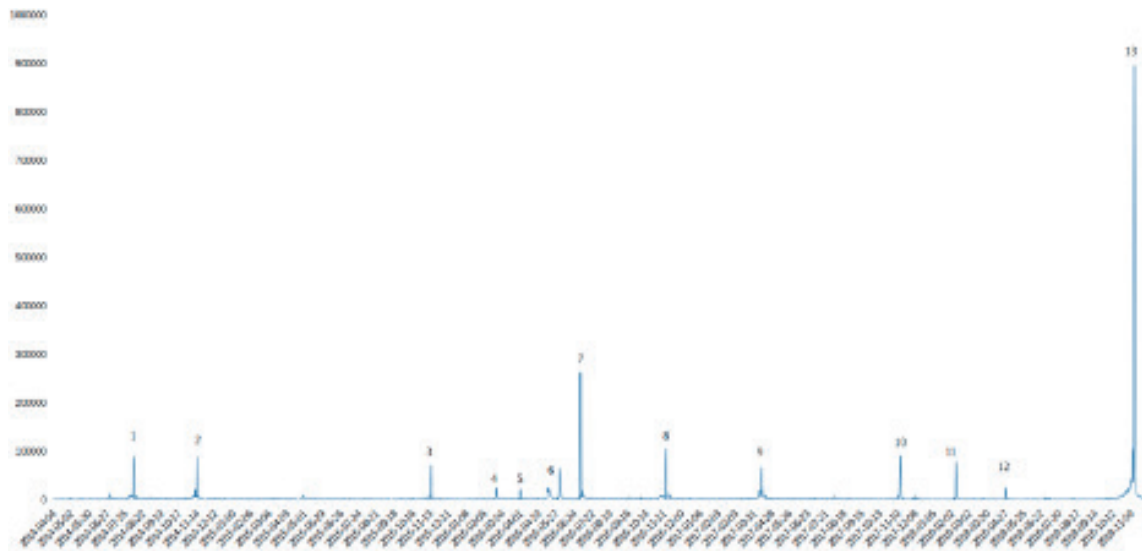
Figure 2 – Number of tweets (including retweets) per day with a keyword related to the Centenary (April 2014-November 2018)
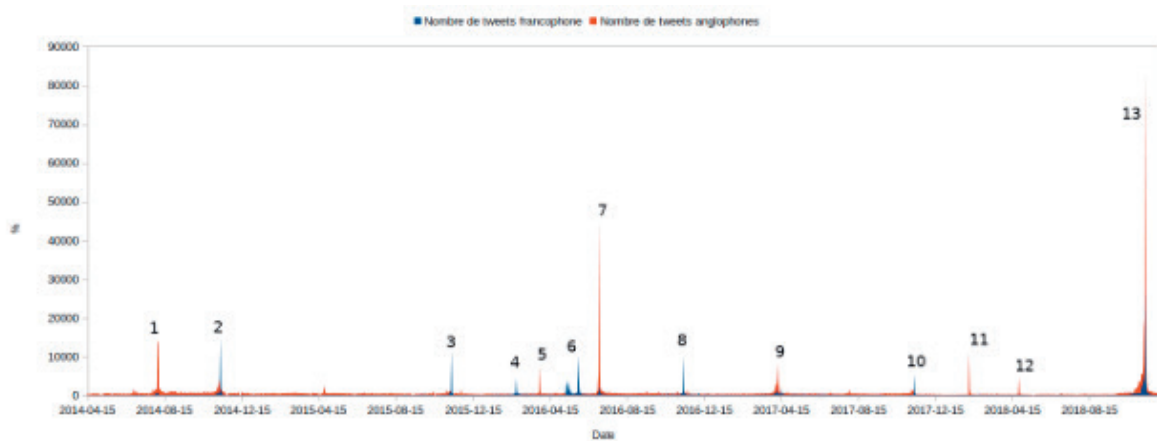

Figure 3 –Number of tweets per day (without retweets) with a keyword related to the Centenary (April 2014-November 2018) in English (red) and French (blue)
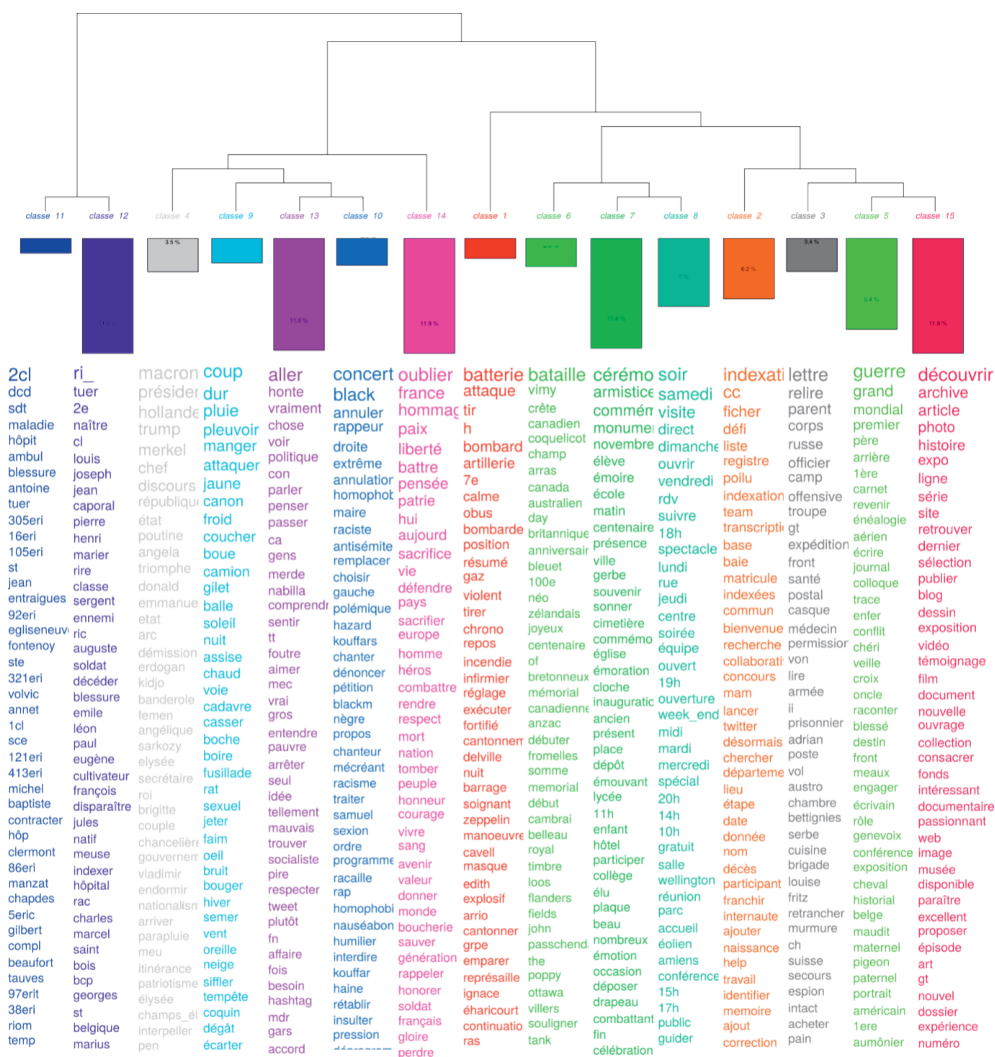
Figure 4 – Clusters of French-speaking tweets. The keywords for each cluster are the words that are the most representative of those clusters of tweets. Clusters are calculated based on collocation of words. Made with the iramuteq software (iramuteq.org).
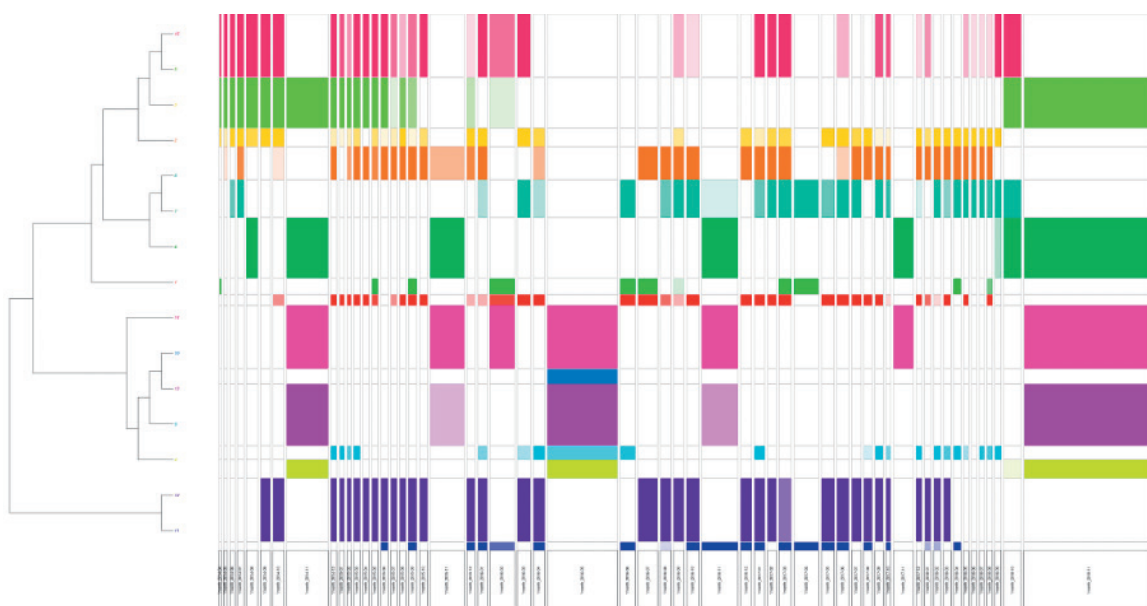

Figure 5 – Projection through time of the Figure 04's clusters. Made with the iramuteq software (iramuteq.org)

The potential tragedy of that kind of research project is the fragility of the data collected: in fact, we are subordinated to a few platforms' willingness to allow us to access their data. Here again, the question of what's available and what's not, of those who have access to data and those who have not is of the greatest importance. If lots of researchers are working with Twitter data, it was because, until the end of April 2023, those data were cheap if not free to acquire. But access to his data has been cut off, even for "registered" researchers who had the right to collect 10 millions tweets per months on the whole history of Twitter. Data accessibility is a strong stake for the next few years[28].

Discreet digital practices

If lots of digital history projects can look impressive, we also need to be carefull to new and discreet practives that have emerged. By "discreet pratices" we mean all digital practices that are used in the daily work of historians but are not documented[29]. For instance, many historians, when they write, speak about their primary sources as if they had actually had them in hands, whereas footnotes send their readers to the digitized artefact of this primary source. Not documenting those practices bears the risk of bringing new biases without being conscious of them.

Conclusion

What could we learn from the rise of digital history and digital practices in history as a discipline when we teach? I'll draw a few preliminary remarks here.

The first remark is that, in the digital era as well as in the "analog" era but in a way that is much more important, most citizens' encounters with the (historical) past happen in a non-academic or non-secondary-education context. One of the most striking example of that are video games. This puts the emphasis on the importance of public history and the necessity to link it with digital history. Public history puts forward the notion of "shared authority"[30] between historians and their (active) audience. This shared authority is key to organize public history projecets, whether in the digital world or not, but there is also a *de facto* shared authority, in the sens that many citizens are *doing*

history with no historians on their side, mostly on the web. This can be difficult to handle for a profession that is not used, besides public historians, to confront a wider audience.

The second remark is that there's no such persons as digital natives. Depending on their generation, "digital natives" are in fact – ant all of them – facebook, or snapchat, instagram, whatsapp "natives". We should not assume that our students are better fitted to the datafied world we are living in. All our teaching should be very clear about how the digital tools and methods we are using are functioning.

My third and last remark will be based on the late Peter Haber's book[31]. Historical sciences' basics are still valid, whether they emphasize the importance of primary sources and their critical appraisal, the importance of methodology, the importance of reading. But those basics are to be updated to encompass the digital world we are living in.

One of the things that the release of ChatGPT in 2022 has shown is that, as historians, we should be timelords. But we are not: today, the advances of digital technologies are imposing us their rythm when we should be mastering time in order to be able to renew our methodologies at our own pace. Though it seems impossible today, but we should work towards finding our own pace again.

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28. The European Union has understood this issue, including with the *Digital Service Act*, but could go even firther: see «Les conversations sur les médias sociaux sont des expressions démocratiques qui ne sauraient être cachées à la recherche», *Le Monde.fr*, juin 2023.

29. Muller Caroline et Clavert Frédéric, «De la poussière à la lumière bleue», *Signata. Annales des sémiotiques / Annals of Semiotics* (12), 31.05.2021. En ligne: https://doi.org/10.4000/signata.3136, consulté le 12.10.2022.

30. Michael H. Frisch, *A Shared Authority: Essays on the Craft and Meaning of Oral and Public History*, Albany, State University of New York Press, 1990.

31. Peter Haber, *Digital Past. Geschichtswissenschaften Im Digitalen Zeitalter*, München, Oldenbourg Wissenschaftsverlag, 2011.

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Since 1954, following the adoption of the Cultural Convention, the Council of Europe has been working on history in response to Article 2, which stipulates:

"Each Contracting Party shall, insofar as may be possible:

a. encourage the study by its own nationals of the languages, history and civilisation of the other Contracting Parties and grant facilities to those Parties to promote such studies in its territory; and

b. to promote the study of its language or languages, history and civilisation in the territory of the other Contracting Parties and grant facilities to the nationals of those Parties to pursue such studies in its territory."

As part of the intergovernmental programme on history education, the Education Department has launched a series of Forums on key topics concerning history in the first quarter of the 21st century. In November 2022, the first Forum focused on "Sites of Memories: Learning spaces for democracy" was held in Belgrade. The second Forum, of which this publication is the report, looked at "History Education in the digital age" and took place in Brussels in March 2023. The third Forum in Bologna in May 2024 will focus on the challenges of history in higher education, before a final Forum in 2025 will take up the conclusions of the three previous Forums in order to draw up recommendations for public authorities.

Thinking about "history education in the digital age" means facing up to the challenges of both research (how to manage all the digitised archives, how do we recognise the true from the false in this avalanche of documents?) and teaching (how to make the best use of video games developed on a historical framework? how can we make the most of learners' digital knowledge of history?) and in terms of training for teachers and historians, and so forth, and to a host of questions and major challenges facing all European societies. At a time when history is facing distortion, manipulation and exploitation, this publication, whilst it cannot provide all the answers, it can certainly help to clarify some of the elements in the debate.

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