Rathenau Instituut

More grip on digitisation Appendix 1

Background document phase II

Contents

1 United Kingdom

1.1 Introduction

The United Kingdom is a unitary parliamentary constitutional monarchy. The monarch (Elizabeth II) is the head of state. The prime minister (Boris Johnson) is the UK's head of government. The prime minister chooses a cabinet and its members are formally appointed by the monarch to form Her Majesty's Government. The British Cabinet is fully parliamentary, the ministers come from the lower house or upper house. A cabinet can rule as long as it enjoys the confidence of the majority of the parliament.

The bicameral parliament is the supreme legislative body of the UK. The House of Commons consists of 650 elected members, known as Members of Parliament or MPs. The House of Lords consists of 775 members. Membership is granted by appointment or else by heredity or official function.

In the UK there is no formal Constitution, but there is a constitutional order that has evolved over the centuries. There are also specific laws such as the Parliament Acts, which regulate, among other things, legislative procedures.

All legislation must be passed by the House of Commons to become law and it controls taxation and the supply of money to the government. Government ministers (including the Prime Minister) must regularly answer questions in the House of Commons and there are a number of select committees that scrutinise particular issues and the workings of the government.

Since the Parliament Acts 1911 and 1949, the powers of the House of Lords have been very much less than those of the House of Commons. All bills except money bills are debated and voted upon in the House of Lords; however, by voting against a bill, the House of Lords can only delay it for a maximum of two parliamentary sessions over a year. After that time, the House of Commons can force the Bill through without the Lords' consent, under the Parliament Acts.

In this study, we will look into committees from both houses. We will limit our focus on six different select committees and the [Parliamentary Office of Science and Technology](#) (POST).

The [Commons Committee Digital, Culture, Media & Sport](#) is a departmental committee and therefore largely concerned with examining the spending, policies and administration of the government's Department for Digital, Culture, Media & Sport (DCMS). The [Sub-Committee on Disinformation](#) was established to continue the committee's work on disinformation and 'fake news'. The [Commons Science and Technology Committee](#) is a cross-cutting committee as it examines the activity of departments where they have implications for, or made use of, science, engineering, technology and research. But also specifically scrutinises the Government Office for Science. The [Lords Science and Technology Committee](#) is an investigative committee; it is a sessional committee, meaning that it continues in each Parliamentary session. It undertakes cross-departmental inquiries into science for policy, policy for science, and technology assessment. Lord Select Committees do not shadow the work of individual government departments, but look into specialist subjects; some Peers have specialist expertise and can commit a greater amount of time (compared to MPs) available to them to examine issues.[1] Both the [Lords Committee on AI](#) and the [Lords Democracy and Digital Technologies Committee](#) are ad hoc (now called special inquiry) committees. This type of committee considers a specific issue for a single parliamentary session. The former published the report "AI in the UK: ready, willing and able?" in April 2018. The final report of the latter is scheduled to be published in June 2020.

Inquiries by Select Committees
Select committees are cross-party groups of MPs or Lords (or both) charged by Parliament with a specific role or with investigating a specific issue. They are one of Parliament's main tools for holding the government to account.

It is important to note that there is a division between committees which that consider policy and public spending and those which examine legislation. In the Commons, for each piece of legislation, a separate committee is formed. The committees in the Commons which look at bills, secondary legislation and European legislation are ad hoc bodies; they pop up and disappear again.[2] In the Lords, there is are permanent committees to examine certain forms of legislation (the Secondary Legislation Scrutiny Committee, and the European Union Committee); temporary committees can be established to examine significant bills.

The most common method for both public bill committees and the committees that are focused on scrutinizing what the government is doing is an inquiry. Committees set up inquiries into a subject of their choosing, and publish a call for evidence via the Committee's website and a press release. This includes a "terms of reference" to explain the issues or questions they want to address and like input on. An inquiry

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1   https://www.parliament.uk/about/how/committees/select/
2   https://www.instituteforgovernment.org.uk/publication/parliamentary-monitor-2018/select-committees

can thus focus on topical issues, specific areas of government policy, or the scrutiny of draft bills.

Usually, committees meet once or twice a week. During meetings, the committee can invite relevant groups or individuals for questioning. Such oral evidence is normally taken in public. Inquiries may also rest on written evidence alone.[3] Anyone can submit relevant information, but the committee also actively seeks written evidence from interested parties and the government department involved. Furthermore, committee members may also make visits in connection with their inquiries to gain first-hand knowledge of the issues.

Whereas public bill committees are highly party-political, there is minimal party influence in the other committees' work. In public bill committees, members ask their own experts to engage in inquiries and written evidence. In the other committees, however, there is less focus on party political views when they are working on an inquiry. Therefore, party-political lines do not pop up as much in the hearings. They are focused on scrutinising the government and leave their party political opinion at the door. Moreover, the staff of the committees is not allowed to have any party affiliation and briefings are impartial. Consequently, the reports and recommendations are also a joint effort and based on consensus. This, in combination with media attention, also puts pressure on the government to adopt the recommendations.

The support of select committees consists of a team of staff led by the Clerk who works closely with the Chair. The website of the Institute for Government explains that "the Chair of a [Commons] committee determines its impact more than any other factor. […] Of the Chairs elected, four are former secretaries of state, eight are former ministers of state, and eight are former shadow secretaries of state. Several others are senior figures in their parties."[4] The Chairs play a key role in setting the agenda and leading the committee's work. During the interviews this was confirmed; the status and enthusiasm of the Chair – in both the Commons and the Lords committees - is a key factor in the success of the committee and impact of its publications.

The staff does not only provide administrative support; some of the staff is tasked to gather and analyse evidence, advise on lines of inquiry, and help in the drafting of reports. Additionally, the committees can appoint 'specialist advisers'. These are external specialists paid by the day, for example, academics and other people with specialist knowledge in a particular area, to advise on technical matters concerning

3   https://www.scienceinparliament.org.uk/publications/guide-to-science-in-parliament-and-government/
4   https://www.instituteforgovernment.org.uk/publication/parliamentary-monitor-2018/select-committees

an inquiry.[5] They can for instance help to scope and draft the call for evidence, review the evidence, answer questions of members and advise the Chair.

The Chair prepares a draft report together with the committee staff.[6] This draft is to be considered and agreed by the committee; this may take several meetings. Once the report is formally approved by the whole committee, the findings are published on the Parliament website and send to the House. Generally, the report includes recommendations directed to the government department.

One unique aspect of select committee scrutiny is the fact that governments are committed to reply to every select committee report, and to do so within 60 days of its publication, setting up the possibility of real dialogue between Parliament and government over the direction and implementation of the policy.[7]

The response normally takes the form of a memorandum to the committee which is then published by the Commons committee as a Special Report [simply saying, in effect, 'we have received the following reply ...']. Lords Committees simply publish the Government response, not as a Special Report. Sometimes the Government will publish a response itself as a White Paper[8]. Once the government response to a Commons committee has been published, the report and the response may be debated (all reports by Lords committees are always debated in the Lords Chamber). During the debate, MPs (or Peers) can question a Minister, and MPs (or Peers) outside the committee can express their interest in the issue. Committees can also follow up reports by giving a Minister further evidence as policy develops or the situation changes.[9] Committees will occasionally publish a further report of their own addressing the Government response."[10] "If dissatisfied with the response, or to establish what progress has been made, the Committee may issue a follow-up report or conduct a short follow-up inquiry."[11]

"Based on data from the 2016/17 session, a select committee incurs on average just over £26,000 of expenses per financial year. This includes the cost of special

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5   https://www.parliament.uk/documents/commons-information-office/p02.pdf

6   In practice, the staff usually writes the report, and the committee revises it. This means that the staff is very engaged with the content, not just the administrative or procedural aspects. They have a key role in preparing the briefings, attracting specialist advisors, and communicating the results.

7   https://www.instituteforgovernment.org.uk/publication/parliamentary-monitor-2018/select-committees

8   White papers are policy documents produced by the Government that set out their proposals for future legislation. White Papers are often published as Command Papers and may include a draft version of a Bill that is being planned. This provides a basis for further consultation and discussion with interested or affected groups and allows final changes to be made before a Bill is formally presented to Parliament. See: https://www.parliament.uk/site-information/glossary/white-paper/

9   https://www.parliament.uk/documents/commons-information-office/p02.pdf

10 https://www.parliament.uk/documents/commons-information-office/p02.pdf

11 https://www.scienceinparliament.org.uk/publications/guide-to-science-in-parliament-and-government/

advisers, overseas visits and witnesses' expenses, though does not include staff costs.[12] The staffing costs of an 'average' Commons select committee are around half a million pounds annually."[13]

The Liaison Committees
In both in the House of Commons and in the House of Lords, there are domestic committees that facilitate some aspect of parliamentary process, or administration of the House.

The Liaison Committee in the House of Commons is made up of the Chairs of each of the select committees. The committee's role includes "considering general matters relating to the work of select committees – agreeing guidelines and core tasks for committees and promoting effective scrutiny".[14]

In March 2018 it published a report "Changing committee practice and procedure: enhancing effective working" and in September 2019 the report "The effectiveness and influence of the select committee system".

The House of Lords Liaison Committee advises the House on the resources required for select committee work and allocates resources between select committees. It also reviews the select committee work of the House and considers requests for ad hoc committees and reports to the House with recommendations. Lastly, it ensures effective coordination between the two Houses and considers the availability of Lords to serve on committees.[15]

The Liaison Committee Chairman invites members of the House of Lords to put forward their proposals for special inquiry (formerly ad hoc) committees.[16] All ideas submitted by the deadline are considered by the Liaison Committee using the following criteria for selection:
- Makes the best use of the knowledge and experience of Members of the House
- Complements the work of Commons departmental select committees
- Addresses areas of policy that cross departmental boundaries
- The activity proposed should be capable of being confined to one session

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12 Independent Parliamentary Standards Authority, *Annual Report and Accounts 2017/18 (HC 1438),* Independent Parliamentary Standards Authority, July 2018, www.theipsa.org.uk/media/184883/annual-report-and-accounts.pdf, p. 64
13 https://www.instituteforgovernment.org.uk/publication/parliamentary-monitor-2018/select-committees
14 See: https://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN03161#fullreport
15 https://publications.parliament.uk/pa/ld201719/ldselect/ldliaison/309/30901.htm
16 13 November 2018 : Proposals for 2019–20 special inquiry (formerly ad hoc) committees sought (URL : https://www.parliament.uk/business/committees/committees-a-z/lords-select/liaison-committee/news-parliament-2017/proposals-for-201819-ad-hoc-committees-sought/)

The committee usually envisions a total of four new committees to be appointed in a session, but receive a large number of proposals. Special inquiry committees are appointed to undertake a particular inquiry and cease to exist once they have reported to the House.[17]

In July 2019 the House of Lords Liaison Committee published a report Review of House of Lords Investigative and Scrutiny Committees: towards a new thematic committee structure. It recommends a move towards a more thematic structure of committee activity, addressing current scrutiny gaps including those around health, education and social affairs. The review was the first wide-ranging review of its committee system in 25 years, considering whether its current structure is fit for purpose. Following the EU referendum, the review was also to analysed the options for redeploying the large proportion of Lords' resource currently devoted to the scrutiny of EU legislation. In the end, it did not specifically look at the EU Committee and sub-committees because Brexit was still an ongoing process.

1.2   Commons Select Committee Digital, Culture, Media & Sport

ORIGIN & POSITIONING

In the United Kingdom, there is a permanent parliamentary committee which is formally concerned with the theme of digitisation: the Commons Select Committee Digital, Culture, Media & Sport.

Each government department (25 in total) has a Common Select Committee to examine spending, policies and administration on behalf of the House of Commons and the electorate. The Department for Digital, Culture, Media & Sport (DCMS) is about "creating a world-leading digital economy, promoting the UK's cultural, sporting and artistic heritage and building a bigger, stronger civil society."[18] It is responsible for several government policy areas including broadcasting (incl. BBC), press freedom and regulation, internet and international ICT policy, telecommunications and broadband, digital economy.

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17   NB: "Despite the popularity of special inquiry committees, several members have continued to draw attention to their obvious disadvantage compared to sessional committees, which is that the Committees do not continue once they have reported. There are also no dedicated resources to follow up on their work, although the Liaison Committee itself has undertaken limited follow-up activity, supported by briefing notes prepared by Library staff. The question of following up the work of special inquiry Committees is being considered by our current major review of House of Lords committee activity."
     https://publications.parliament.uk/pa/ld201719/ldselect/ldliaison/309/30903.htm#_idTextAnchor002
18   https://www.civil-service-careers.gov.uk/departments/working-for-the-department-for-digital-culture-media-and-sport/

DCMS originates from the Department of National Heritage and was renamed as the Department for Culture, Media and Sport in 1997. In July 2017 "Digital" was added to its name because a significant part of its responsibilities came to cover digital subjects and the digital sector. The change was formalised by former cabinet minister Karen Bradley.[19]

The interviews clarified that, in practice, the DCMS Committee is not more focused on digital than any other departmental Select Committee; as every committee has its digital themes. The inquiries of the DCMS Committee are always somewhat related to media and sports affairs; they do not look into all other digital domains, the digital transition as a whole, or the implications in the energy domain. The DCMS department works a lot with the Department for Business, Energy & Industrial Strategy (BEIS). And also the Science and Technology Committee (S&T) did an inquiry on screen use with social media. However, the S&T Committee is a cross-cutting committee, and their inquiries focus more on science. Digital policy, trade, online harms are topics that belong to the domain of DCMS. Because the domains are in some regard close to each other, there is some friction amongst the committees. However, there is no discussion about how to reorganise or coordinate the parliamentary processes with regard to digitalisation issues. It is not conceived of as a problem. Actually, looking to digital within different applications is considered more useful.

It is also explained that DCMS is a bit of a 'bucket'; they just add and add to the remit. According to one of the interviewees, adding 'digital' to the committee was also very much driven by the personal interests of the Chair. Moreover, it is already visible that the new Chair has new priorities; focusing more on internal audiences, other parliamentarians and civil society, whereas the former Chair[20] was very much engaged with the general public through the media.

About the department
Nicky Morgan was appointed Secretary of State for Digital, Culture, Media and Sport on 24 July 2019. Matt Warman was appointed as Parliamentary Under-Secretary of State (Minister for Digital and Broadband) on 26 July 2019. His responsibilities include Online Harms and Security; Digital Infrastructure, including Full Fibre rollout and BDUK; Digital Skills; Digital and Tech Policy; Cyber Security

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19   Quote: "DCMS celebrates its 25th anniversary this year, and it is fitting now to include Digital in the name. The department has taken on significant new responsibilities in recent years, so that half of its policy and delivery work now covers the digital sectors - telecommunications, data protection, internet safety, cyber skills and parts of media and the creative industries." https://www.gov.uk/government/news/change-of-name-for-dcms, Published 3 July 2017

20   The Chair of the DCMS Committee at the end of Parliament 2017-19 was Damian Collins; a Conservative MP for Folkestone and Hythe. He has been an MP continuously since 6 May 2010.

and Cyber Skills. Susannah Storey became the Director-General for Digital and Media Policy in September 2019.[21]

High profile groups within DCMS include the 'Office for Artificial Intelligence', the 'Centre for Data Ethics and Innovation', and the 'UK Council for Internet Safety'.

- The Office for Artificial Intelligence is part of DCMS and the Department for Business, Energy & Industrial Strategy (BEIS) and "responsible for overseeing the implementation of the AI and Data Grand Challenge".[22]
- The Centre for Data Ethics and Innovation (CDEI) is an independent advisory body part of DCMS "tasked by the Government to connect policymakers, industry, civil society, and the public to develop the right governance regime for data-driven technologies."[23] CDEI aims to give the public a voice, and how issues related to autonomy, privacy and data protection principles could promote or undermine trust.[24]
- The UK Council for Internet Safety is part of DCMS, the Department for Education, and the Home Office. It is "a collaborative forum through which government, the tech community and the third sector work together to ensure the UK is the safest place in the world to be online".[25] It aims to contribute towards strategic goals such as "providing parents, teachers and professionals with the tools to recognise and respond to online harms" and "create an online environment that is safer for all users".[26]

Selection of relevant policy papers[27]:

- Statement of Strategic Priorities - 31 October 2019
The Statement of Strategic Priorities for telecommunications, the management of radio spectrum, and postal services were designated on 29 October 2019, having been laid in draft before Parliament on 18 July 2019.

- Culture is Digital - 18 September 2019

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21 https://www.gov.uk/government/organisations/department-for-digital-culture-media-sport
22 https://www.gov.uk/government/organisations/office-for-artificial-intelligence
23 https://www.gov.uk/government/organisations/centre-for-data-ethics-and-innovation
24 Currently, they are working on a targeting policy review and an algorithmic bias policy review, an AI Barometer and responsive thematic projects. See: https://www.gov.uk/government/publications/the-centre-for-data-ethics-and-innovation-calls-for-evidence-on-online-targeting-and-bias-in-algorithmic-decision-making/centre-for-data-ethics-and-innovation-review-of-online-targeting and https://www.gov.uk/government/publications/interim-reports-from-the-centre-for-data-ethics-and-innovation/interim-report-review-into-bias-in-algorithmic-decision-making
25 https://www.gov.uk/government/organisations/uk-council-for-internet-safety
26 https://www.gov.uk/government/organisations/uk-council-for-internet-safety/about
    There is also a National Cyber Security Centre, part of the Government Communications Headquarters, which works with the ministerial department Foreign & Commonwealth Office.
27 https://www.gov.uk/search/policy-papers-and-consultations?content_store_document_type%5B%5D=policy_papers&order=updated-newest&organisations%5B%5D=department-for-digital-culture-media-sport&page=2&parent=department-for-digital-culture-media-sport

Using technology to drive audience engagement, boosting the digital capability of cultural organisations and unleashing the creative potential of technology.

- Tackling fraud in government with data analytics - 27 June 2019

Government wants to hear the views of citizens, academia, and industry on how we can approach the challenges of using data and analytics to counter fraud in the public sector.

- Smart Data Review - 11 June 2019

Review looking at how we can use data portability to improve the consumer experience.

- Artificial Intelligence Sector Deal - 21 May 2019

A Sector Deal between government and the Artificial Intelligence (AI) sector.

- Cyber Security Skills Strategy - 3 May 2019

The Government has published an Initial National Cyber Security Skills Strategy and is currently considering responses to the Call for Views.

- Digital Charter - 8 April 2019

A response to the opportunities and challenges arising from new technologies.

- Connected Growth - 5 April 2019

A manual for places working to boost their digital, cultural and social connectivity

- UK Digital Strategy - 1 March 2017

This strategy sets out how we will build on our success to date to develop a world-leading digital economy that works for everyone.

- Digital Skills and Inclusion Policy - 5 April 2017

The Digital Skills and Inclusion Policy page provides an overview of government digital skills and inclusion work, and suggests useful links for more information and resources.

- The Digital Skills Partnership Board and Terms of Reference - 20 November 2017

The Digital Skills Partnership brings together public, private and charity sector organisations to boost skills for a world-leading, inclusive digital economy.

Guidance and regulation[28]

- DCMS International Tech Hub Network - 17 December 2019

The International Tech Hub Network (ITHN) works to forge innovation partnerships between the UK and international tech sectors, stimulate local digital economies, and build high-end digital skills to drive sustainable jobs and growth.

- National Data Strategy - 6 November 2019

The aim of the National Data Strategy (NDS) is to drive the collective vision that will

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28   https://www.gov.uk/search/guidance-and-regulation?organisations%5B%5D=department-for-digital-culture-media-sport&parent=department-for-digital-culture-media-sport

support the UK to build a world-leading data economy. It will help ensure that people, businesses and organisations trust the data ecosystem, are sufficiently skilled to operate effectively within it, and can get access to high-quality data when they need it. The NDS will also provide coherence and impetus to the wide range of data-led work across government while creating a shared understanding across the economy of how data is used.

- Building Digital UK - 17 October 2019
Building Digital UK (BDUK) is delivering broadband networks to the nation. Most of the UK can now get fast, reliable broadband and the government has a range of programmes that could help to increase speeds and access for homes and businesses.

- Data Ethics Workbook - 13 June 2018
How to work to the Data Ethics Framework for the public sector. The Data Ethics Workbook questions will help you decide how you to align your work with the Data Ethics Framework principles. It will help you design an implementation plan for managing high quality results and mitigating risks.

- Data protection law – Brexit - 23 April 2019
A summary of how the Government intends the UK's data protection law will work in the event the UK leaves the EU without a deal.

- Cyber Essentials Scheme: overview - 16 January 2018
Cyber Essentials is a Government-backed, industry-supported scheme to help organisations protect themselves against common online threats.

- Digital Skills Partnership (DSP) - 19 October 2018
This partnership aims to improve digital skills for people and organisations. DSP brings together public, private and charity sector organisations to help increase the digital capability of individuals and organisations in England. Its work extends from a commitment within the UK Digital Strategy which sets out the government's ambition to create a world-leading digital economy that works for everyone.

Tasks of the committee
The Digital Culture, Media and Sport Committee is, like most Common Select Committees, largely concerned with examining and commenting on the policy of its corresponding government department.

> To inform; the committee chooses its own inquiries and produces reports which are suitable for debate in the House, including Westminster Hall, or

committees. Thereby, it has a role in choosing topics to inform the government on.

To address; the committee can address specific topics because the government is obliged to respond to their publications. This gives them more influence than merely a report to inform.

To control; the committee monitors the policy, administration and expenditure of the Governmental counterpart, the Department of Digital, Culture, Media and Sports. It monitors all departmental reports, business plans and performance indicators; conducting a regular cycle of work on activities of the regulators, executive agencies, quangos and other associated bodies within their department's purview; and review the progress of the department following the committee's previous reports.

To advise; publications of the committee include recommendations. This together with the obligation of the government to respond to each of their recommendation within two months, leads to the potential to have a (significant) impact on the debate, questions and decision-making.

To coordinate; there is no focus on coordinating between committees; the committees work like silos. There are informal networks between committee staff, the libraries and POST; this way the staff share and align ideas with other committees. Also, the digital spokespeople meet in an ad hoc way.

To legislate; to conduct scrutiny of any published draft bill within the Committee's responsibilities. However, general committees (incl. public bill committees) consider proposed legislation in detail.

SET-UP & APPROACH

The Digital, Culture, Media and Sport Committee is a departmental select committee in the UK Parliament which has a minimum of 11 members; as a matter of practice, these are back-bench MPs.[29] The membership reflects the strength of the parties in the house. The Chair of the committee is voted on by the whole house.

The support consists of 2-3 specialists, a clerk and a second clerk. Each specialist is running a different inquiry. Usually, 5-6 inquiries are running at the same time, but at different speeds (so they are in different phases).

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29   https://www.parliament.uk/documents/commons-information-office/p02.pdf
     "Ministers, opposition front-bench spokesmen and party whips do not normally serve on departmental select committees."

Each committee has a research budget for special advisors and research. Some committees do not commission any research, they rely on the written evidence only. For the reality tv inquiry, and the disinformation inquiry, the DCMS Committee, for instance, appointed a special advisor. The Science and Technology committee does not do this very much; it differs per committee.

The article *Select Committees: Agents of Change* describes how the modus operandi of select committees has been challenged in recent years. There is an increased tendency and readiness to respond to public concerns. To quote: "The digital revolution and its impact on the ability of committees to both hear and seek evidence from those outside the magic circle of the 'usual suspects' or the 'Westminster bubble' is likely to be one driver." The authors' key thesis is that committees increasingly draw on campaigning techniques to pursue an agenda. They show that innovation in evidence-collection, for instance, is motivated by both the ambition of broadening the evidence base and the aim of attracting media attention to create pressure. The DCMS Committee is highlighted as they took joint committee working to new heights by taking evidence from Facebook alongside colleagues from eight other parliaments in an 'International Grand Committee'."[30]

> *"In November 2018, the DCMS Committee convened an 'International Grand Committee' (IGC) on disinformation. This was the first time in nearly 100 years that members from outside Westminster had joined a select committee; in 1933, the Joint Committee on Indian Constitutional Reform included parliamentarians from India. MPs from Canada, Ireland, Argentina, Belgium, Brazil, France and Latvia joined the horseshoe, using a procedural model under which international members were classified as witnesses. All 24 members put questions—nominally via the Chair—of the 'actual' witness, Lord Allan, Facebook's head of policy, and of the empty chair next to him bearing Mark Zuckerberg's nameplate. The ritual empty chairing included a photo that went viral on Twitter. Earlier in the week, the DCMS Committee had dispatched the Serjeant at Arms to serve an order for papers relevant to a court case concerning Facebook in California on a party to the case. Excerpts from these papers, while not yet published, were cited under privilege by DCMS members.*
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> > *The international grand committee (IGC) held a further session with tech companies at the Canadian House of Commons in May 2019 and will meet at the Dáil in Dublin in November 2019."* [31]

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30 Adam Mellows-Facer, Chloe Challender and Paul Evans, Select Committees: Agents of Change, Parliamentary Affairs (2019) 72, 903–922, Advance Access Publication 14 September 2019. (doi:10.1093/pa/gsz039)

31 Adam Mellows-Facer, Chloe Challender and Paul Evans, Select Committees: Agents of Change, Parliamentary Affairs (2019) 72, 903–922, Advance Access Publication 14 September 2019. (doi:10.1093/pa/gsz039)

The inquiry conducted by the DCMS Committee on Fake News also included publishing a large collection of documents received from Facebook as evidence. Moreover, the committees have the power to call for "persons, papers and records". The authors explain the committees seek high-profile witnesses and can use media and reputational pressure, but the Dominic Cummings[32] case showed they are legally toothless (he refused to co-operate with parliament). The option to further formalize their powers are being considered by the Committee of Privileges. However, it is also argued that increasing the role of courts might work against the campaigning approach it is intended to support.

The International Grand Committee can be considered a result of the work of the DCMS Committee. It started off with 7 parliaments and has been expanding ever since. It is the first of its kind and they try to call in big tech companies, such as Amazon, Google, etc. There is no substantive collaboration between the different parliaments. Rather, the International Grand Committee helps to encourage cooperations to talk to MPs.

During the interviews, it became clear that some admire the initiative of a Grand Committee, whereas others are very sceptical. One of our interviewees argued the DCMS committee was annoyed that Mark Zuckerberg did not show up for their inquiry, and that the Grand Committee is just used to bully people into giving evidence. Also, all involved parliaments have different issues. There are obvious tensions about how to regulate, because of the different cultures, and liberal vs less liberal democracies. The Grand Committee can put pressure on people to testify, but how effective a Grand Committee will be in general is hard to say.

It is also mentioned that the DCMS committee organised a working visit to their sister committee in the Bundestag: the Committee on the Digital Agenda. However, political culture appears very different. In Germany, everything is based in legislation, penal bill. This is not the case in the UK. Therefore, it is hard to copy their approach. The advantage of the UK model is that there is more focus on consensus.

RESULTS

Inquiries result in reports. They can be found on the website of the committees.[33]

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32 From 2015 to 2016, Cummings was the director of the successful Vote Leave campaign, an organisation opposed to continued British membership of the European Union that took an active part in the 2016 referendum campaign on that issue.

33 https://www.parliament.uk/business/committees/committees-a-z/commons-select/digital-culture-media-and-sport-committee/inquiries/?y=2017&mode=0

Example: **Immersive and addictive technologies**[34]
12x Oral Evidence
132x Written Evidence
Report: 12 September 2019
"The immersive and addictive technologies inquiry investigated how games companies operate across a range of social media platforms and other technologies, generating vast amounts of user data and operating business models that maximise player engagement in a lucrative and growing global industry.

- Sale of loot boxes to children should be banned
- Government should regulate 'loot boxes' under the Gambling Act
- Games industry must face up to responsibilities to protect players from potential harms
- Industry levy to support independent research on long-term effects of gaming
- Serious concern at lack of an effective system to keep children off age-restricted platforms and games

MPs on the Committee have previously called for a new Online Harms regulator to hold social media platforms accountable for content or activity that harms individual users. They say the new regulator should also be empowered to gather data and take action regarding addictive games design from companies and behaviour from consumers. E-sports, competitive games played to an online audience, should adopt and enforce the same duty of care practices enshrined in physical sports. Finally, the MPs say social media platforms must have clear procedures to take down misleading 'deep-fake' videos – an obligation they want to be enforced by a new Online Harms regulator.

In a first for Parliament, representatives of major games including Fortnite maker Epic Games and social media platforms Snapchat and Instagram gave evidence on the design of their games and platforms." [35]

Example: **Disinformation and 'fake news'**[36]
22x Oral Evidence
101x Written Evidence

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34   https://www.parliament.uk/business/committees/committees-a-z/commons-select/digital-culture-media-and-sport-committee/inquiries/parliament-2017/immersive-technologies/publications/
and https://www.parliament.uk/business/committees/committees-a-z/commons-select/digital-culture-media-and-sport-committee/news/immersive-technology-report-17-19/

35   News Parliament UK, Immersive and addictive technologies report published (12 September 2019) URL : https://www.parliament.uk/business/committees/committees-a-z/commons-select/digital-culture-media-and-sport-committee/news/immersive-technology-report-17-19/

36   https://www.parliament.uk/business/committees/committees-a-z/commons-select/digital-culture-media-and-sport-committee/inquiries/parliament-2017/fake-news-17-19/publications/

Final report: 18 February 2019
Interim Report: 29 July 2018
"Calls for:
- Compulsory Code of Ethics for tech companies overseen by independent regulator
- Regulator given powers to launch legal action against companies breaching code
- Government to reform current electoral communications laws and rules on overseas involvement in UK elections
- Social media companies obliged to take down known sources of harmful content, including proven sources of disinformation
Further finds that:
- Electoral law 'not fit for purpose'
- Facebook intentionally and knowingly violated both data privacy and anti-competition laws" [37]

Example: **Cyber security: Protection of personal data online**
2x Oral Evidence
130x Written Evidence
Final report: 20 June 2016
"The recent cyber-attack of TalkTalk's website, where initially it was feared that the personal details, including bank details, of over four million customers had been hacked and made public, gives rise to questions and concern over the ways companies store and secure information about their customers. TalkTalk has already been subject to two previous attacks this year.
In light of these incidents, the Culture, Media and Sport Committee has decided to hold an inquiry into the circumstances surrounding the TalkTalk data breach and the wider implications for telecoms and internet service providers." [38]

IMPACT

When fake news started to dominate the news, members got interested in the topic of disinformation. The fact that Cambridge Analytica was UK-based also added to the pressure on the government. The Chair, Damien Collins had an important role in setting the agenda for the committee, deciding which witnesses to invite, and building bonds with civil societies organisations, public discourse. In general select

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37 News Parliament UK, Disinformation and 'fake news': Final Report published (18 February 2019) URL : https://www.parliament.uk/business/committees/committees-a-z/commons-select/digital-culture-media-and-sport-committee/news/fake-news-report-published-17-19/

38 https://www.parliament.uk/business/committees/committees-a-z/commons-select/culture-media-and-sport-committee/inquiries/parliament-2015/cyber-security-15-16/

committees are considered "one way for civil society organisations to influence the debate and potential future policy on an issue."[39]

The report on fake news and the inquiry on immersive gaming got a lot of air time. High profile and diverse people came in for the inquiry and that's generally a good way to get media attention and to get more interests from MPs. This meant there was a lot of media attention all through the process, which is quite unique. This particularly engaging inquiry also added pressure to the recommendations, and thus the government.

Moreover, because of the investigatory process – gathering evidence, collecting data, and interviewing witnesses – the findings in the reports are based on the evidence and do not simply reflect the 'party line'. This contributes to its impact; "[…] a committee's report has genuine weight. Any recommendations put forward as part of a final report have the cross-party backing from its members so they can be seen as a credible and workable solution to an issue." [40]
There have also been interesting spinoffs of the fake news report. The subcommittee on Disinformation is an example. The rationale for establishing the subcommittee was to show intent that the committee was still taking the issues seriously; that it had not ended with publishing the report. The subcommittee is a good way to keep on gathering evidence without having a formal inquiry.
The government response was quite positive and they are working on an online harms bill. This is considered a nice result. A lot of recommendations were addressed in the online harm white paper, but the committee was not happy with how the recommendations were taken up. Therefore, the committee follows up through meetings with the secretary of state to continue the dialogue. The committee is still awaiting the government response on the inquiry on immersive technologies.

Also, the Institute for Government explains that quantifying the impact of select committees on government is difficult: "They have influence through the reports they write, media attention they generate, or by encouraging ministers to brush up on their knowledge before giving evidence. Much of this is hard to measure or trace. Nonetheless, data gives some insight into committees' work, and whether

39   https://www.civilsociety.co.uk/voices/why-work-with-a-uk-parliament-select-committees.html#sthash.uf8lo3z9.dpuf
      → "As well as hearing from national organisations, think-tanks or academics, select committees want to hear from people with experience of the key issues and services - the people who could potentially be affected by any recommendations they make. They actively want to hear a diverse range of perspectives, so they are as interested in hearing the views of staff on the ground as they are the experience of those in the boardroom."
      + https://www.parliament.uk/get-involved/committees/connecting-with-committees-events/
40   https://www.civilsociety.co.uk/voices/why-work-with-a-uk-parliament-select-committees.html#sthash.uf8lo3z9.dpuf

MPs and peers are making the most of the opportunities Parliament affords them to hold the government to account, as well as enhance their own understanding. And analysing the ways in which committees work – the kinds of inquiries they conduct, and how they gather evidence – can help to identify potential areas for improvements in their working practices."[41]

1.3 Commons Select Sub-Committee on Disinformation

ORIGIN & POSITIONING

In April 2019 a sub-committee was launched to continue the DCMS Committee's work on disinformation and 'fake news'.

"The work of the Sub-Committee builds on the DCMS Committee's inquiry into disinformation between 2017 and 2019. The Sub-Committee takes forward the work begun under the inquiry, including individuals' rights over their data, the effect of disinformation on political activity, the regulation of big tech and online harms." [42]

Damian Collins, the Chair:

> "As we stated at the time, our report on Disinformation and 'fake news', was not the final word on the matter. We believe that there's a strong public interest in establishing the Sub-Committee to continue probing ongoing threats posed by disinformation to democracies, a threat that hasn't disappeared with the end of our inquiry. We look forward to continuing the highly important work that we have begun.
>
> Since beginning our investigations, tech companies have only shifted superficially in their approach to privacy, and only for the benefit of their own PR. It's unacceptable and we must keep up the pressure for them to shift their approach to ensure people and their rights are protected.
>
> The launch of the Sub-Committee on Disinformation signals our commitment to ensure that new legislation and policies are sufficiently robust when it comes to protecting individuals from the insidious onslaught of disinformation and digital disruption. First on the agenda of the new Committee is scrutiny of the

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41 https://www.instituteforgovernment.org.uk/publication/parliamentary-monitor-2018/select-committees
42 https://www.parliament.uk/business/committees/committees-a-z/commons-select/digital-culture-media-and-sport-committee/sub-committee-on-disinformation/role/

Government's proposals to protect society against online harms and its response to the DCMS Committee's report on Disinformation." [43]

There was a POSTnote on disinformation that fed into the DCMS committee in 2017. When the committee started with their inquiry, this was partly driven by the media coverage on scandals, but also by a more general horizon scanning. As we will discuss later, POST wants to be more proactive; what MPs should know to be less driven by media attention.

SET-UP & APPROACH

The committee chooses its own inquiries and based on both written and oral evidence publishes a report and advises the government by means of forming recommendations. The inquiries are not different from other select committees. The Chair and members of the sub-committee are identical to the DCMS Committee.

> "All Members of the DCMS Committee will be able to attend the Sub-Committee. In addition, we plan to make use of the new Standing Order enabling us to invite members of any other select committee to attend any meeting of the Sub-Committee to ask questions of witnesses. In this way, the Sub-Committee will become Parliament's 'institutional home' for matters concerning disinformation and data privacy; a focal point that will bring together those seeking to scrutinise and examine this threat to democracy.
>
> The Sub-Committee will continue our important work underway with other national parliaments via the 'international grand committee'. We are proud of the collaboration that we have begun. We look forward to visiting Ottawa and other capitals to participate in further meetings.
>
> In launching this Sub-Committee, we are creating a standing programme of work. It signals our commitment to continuing our rigorous scrutiny of democratic accountability, and to play our part in protecting individuals from the insidious onslaught of disinformation and digital disruption. We look forward to continuing the highly important work that we have begun." [44]

The Chair of the committee does most of the agenda-setting; she/he sets the priorities for inquiries. Personal interests of the Chairs, proposals of the staff based on talks with MPs, and work of the government policies like Telecom and

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43   https://www.parliament.uk/business/committees/committees-a-z/commons-select/digital-culture-media-and-sport-committee/sub-committee-on-disinformation/news/sub-committee-launch-report-publihed-17-19/
44   https://publications.parliament.uk/pa/cm201719/cmselect/cmcumeds/2090/2090.pdf

broadband, all feed into the list. The Committee staff also looks at POST to get ideas.

There is no deadline for inquiries in the Commons. Usually, they aim at a duration of six months, but it depends on the setup; how in-depth the inquiry is. The disinformation inquiry took 18 months. It is also possible to have ad hoc sessions.

RESULTS

The subcommittee has not published a report yet. There have only been some oral evidence sessions so far. This can be found on the website of the committee. Due to the general election on 12 December 2019, the Committee has now closed this inquiry.

There have been other subcommittees in other committees, but they are not always the follow-up of an earlier inquiry. There is no extra staff or budget allocated to the committee, so it is just a way of signaling they want to go into more detail on a topic.

IMPACT

It is hard to say something about the impact yet. However, it is clear that MPs make an effort to attend hearings. For the inquiry on disinformation, for instance, there were 7-8 members (of the 11 in total) at meetings. In one of the interviews, it was mentioned that MPs are generally very focused on their own stuff. But the new standing order permits members to visit another committee's inquiry to ask questions. In the report from the Liaison Committee, it is said that this new rule is very successful.

There is also a cluster approach; clusters determine the way committees are located. However, there is no cluster on digitalisation. According to one of our interviewees, this a digital cluster would make no sense since every committee would then be in it. However, on the level of staff, there is some form of coordination as clerks organise meetings among themselves on topics like digitalisation.

1.4   Commons Select Science and Technology Committee

ORIGIN & POSITIONING

In the United Kingdom, there are also committees (in both Houses) dealing with political issues related to the broader theme of science and technology. The

Commons Select Science and Technology Committee was initiated in 1997.[45] The committee examines the activities of government departments that make use of science, engineering, technology and research (science for policy) and scrutinises policies that affect the science and technology sectors, such as research funding and skills (policy for science).[46]

Select Committees of the House of Commons usually examine the work of a specific government department. This particular committee, however, scrutinises the Government Office for Science (GO-Science), which is a "semi-autonomous organisation" based within the Department for Business, Energy and Industrial Strategy (BEIS).[47]

GO-Science is an organisation of up to 80 permanent staff, and is responsible for giving advice to the Prime Minister and members of the Cabinet, "[…] to ensure that government policies and decisions are informed by the best scientific evidence and strategic long-term thinking."[48]

About GO-Science[49]

"Government departments each have their own Chief Scientific Adviser (CSA), and CSAs work together on cross-cutting issues. In some cases the GCSA leads in advising the Government on major cross-cutting issues, working with other CSAs. In doing so he engages the best scientists nationally and often internationally to help him and ensure that his advice is as robust as possible.

Main networks:

- Chief Scientific Advisors Committee

- Heads of Analysis Group (includes heads of all the main analytical professions in Government)

- Departmental Heads of Science and Engineering Profession

- Council for Science and Technology

- Horizon Scanning Centre Futures Analysts Network

- UK Science and Innovation Network (based in British Embassies and consulates)

Much of the Government Office for Science's work looks to the future, focusing on what

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45   The archive of Committee publications dates back to 1997-98. The committee was abolished upon the creation of the Innovation, Universities, Science and Skills Committee on 6 November 2007, and was re-established in 2009. Long history. See:
     https://publications.parliament.uk/pa/cm200910/cmselect/cmsctech/481/48105.htm#n3

46   https://www.parliament.uk/business/committees/committees-a-z/commons-select/science-and-technology-committee/role/

47   BEIS is responsible for business, industrial strategy, science, research and innovation, energy and clean growth and climate change. Within BEIS there are also the high profile groups, such as the Centre for Connected and Autonomous Vehicles, and the Office for Artificial Intelligence.

48   https://www.gov.uk/government/organisations/government-office-for-science/about

49   https://en.wikipedia.org/wiki/Government_Office_for_Science

> science and the evidence base can tell us about how the world could develop and what effects potential interventions might have.

The Parliamentary Under Secretary of State (Minister for Science, Research and Innovation) is the Minister with responsibility for some of the areas the Committee scrutinises and the Minister sits in the Department for Business, Energy and Industrial Strategy. Although, the Committee calls different Ministers from a number of different Government departments to give evidence. Moreover, the committee has a lot to do with DCMS as they work on digitalisation issues also.

The committee has several functions.

> To inform; the committee chooses its own inquiries and produces reports which are suitable for debate in the House, including Westminster Hall, and committees. Thereby, it has a role in choosing topics to inform the government on.

> To address; the committee can address specific topics because the government is obliged to respond to their publications. This gives them more influence than merely a report to inform.

> To control; the committee is charged with the scrutiny of the expenditure, administration and policy of the Government Office for Science, and it looks into various government departments' science for policy and policies for science.

> To advise; the committee's publications include recommendations. This together with the obligation of the government to respond to each of their recommendation within two months, leads to the potential to have a (significant) impact on the debate, questions and decision-making.

> To coordinate; there is no focus on coordinating between committees. However, the committee works closely with the Lords Select Science and Technology Committee and POST.[50] The Chairs of the S&T Committees of both Houses sit on the POST Board. Other coordination endeavours happen mainly at the level of the staff.

> To legislate; general committees (incl. public bill committees) consider proposed legislation in detail.

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50   https://www.scienceinparliament.org.uk/publications/guide-to-science-in-parliament-and-government/

SET-UP & APPROACH

The committee had 11 members until November 2019. The Chair of the Committee at the end of the 2019 Parliament was Norman Lamb (Liberal Democrat). He held several government posts: Minister of State (Department of Health) and Parliamentary Under-Secretary (Department for Business, Innovation and Skills), and Assistant Whip (HM Treasury). The new Chair is Greg Clark (Conservative).

The committee has a small secretariat. The role of the staff is to make proposals on who to cooperate with, they also connect with POST. The latter is even an official task of one staff member. As described before, common select committees can also appoint advisers to obtain specific knowledge from a topic, and they can take written and oral evidence from organisations and individuals for their inquiries. Inquiries can be very varied, both in topic and length. [51]

There are three payment levels for specialist advisors. They are often assigned for a number of days, possibly 10 days divided over a couple of months, to provide expert advice to the Committee.. They are mostly academics. And they help the committee clerk with preparing the briefs and advise staff. But they can meet with the Chair as well, or join the public evidence sessions (or prepare; have a quick talk on the subject to answer questions). Working visits can be very helpful; to see technology in action; helps to visualise.

Some reports may rest on written evidence alone, others on extensive oral hearings, as well as written evidence. For example, for their report "Clean growth: Technologies for meeting emissions reduction targets", published in 2019 they received evidence from 80 organisations and 27 individuals. [52] For the inquiries, the Commons Science and Technology Committee also makes use of the work of the Lords Committee Science and Technology. Inquiries of a Lord Select Committee are fewer but take generally longer and are more in-depth than inquiries of a Common Select Committee. It is unique to have a committee in both the Lords and Commons like this. The committee staff is very focused on keeping an open dialogue and use each other's capacities.

In the inquiry on social media, the Commons S&T quoted evidence from the Lords. And there is Chair-to-Chair engagement also. Committees write formal letters to inform each other, but most information is exchanged through the Chairs and informal discussions amongst clerks. One of our interviewees explained the staff has to be proactive when conveying work to other committees whenever this could be of interest to them; this all happens on an informal basis.

51   https://www.scienceinparliament.org.uk/publications/guide-to-science-in-parliament-and-government/
52   https://www.theyworkforyou.com/debates/?id=2019-09-05b.412.0

It also happens that committees work together on an issue. This was the case on agriculture and technology; they worked on a joint report. There are no joint inquiries on digitalisation so far. The committee worked on an inquiry at the time the Lords Committee on AI was in progress. There were some similar topics, but the inquiries were completely separate. There was just communication on what to publish when mainly to anticipate the media attention. MPs' time can be limited so the Committee generally meets once a week.

In order to choose topics for inquiries, a big list is informed by staff, MPs, stakeholders and the public, regular work by government, natural disaster or media events (hot topics). The committee can support 3-5 inquiries each year.

The Commons Science and Technology Committee has sought to widen its external engagement with the public, experts and institutions, with the 'My Science Inquiry' initiative. Submitters are asked to describe in 200 words or a short video,[53] the issue that might be explored, why it deserved attention, and how Government policy in the area could be developed or improved.

The Committee received approximately 90 suggestions and shortlisted ten submissions to come and deliver a pitch. Inquiries that will be launched as a result are: an inquiry into commercial genomics, an inquiry on the impact of science funding policy on equality, diversity, inclusion and accessibility, and an inquiry into the role of science and technology in addressing challenges to food security and biodiversity.

In the interview, it was explained that there is no inquiry, especially on digitalisation. Lots of farming issues came up because the call was shared on social media by the committee on agriculture. This had a lot of impact apparently. The S&T Committee had not asked this committee or other committees to share it on social media.

The S&T Committee is one of the few Committees to do a public call for ideas for future inquiry.. However, there are also citizens assemblies organised by multiple select committees, aimed at having more impact and co-creating ideas The liaison committee namely reported on how a committee can be more proactive, and the selection of topics less ad hoc and argued a strategy is needed. The liaison committee wants committees to have more robust procedures and define 'areas of interest'. POST and libraries also contribute to preparing inquiry briefs that could potentially be an inquiry.

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53   Normally, a piece of written evidence may be 3000 words.

RESULTS

The inquiries usually result in reports. These can vary in length. Occasionally, the committee publishes the evidence without a report 'as a means of placing matters on record'.[54]

Former inquires included topics such as algorithms in decision-making, commercial and recreational drone use in the UK, digital government, the impact of social media and screen-use on young people's health, quantum technologies.[55]

Example: **Algorithms in decision-making inquiry**[56]
Published on 23 May 2018
(Response from the Government was received on 23 July 2018)
This inquiry examined the increasing use of algorithms in public and business decision making. It assessed how algorithms are formulated, the scope for error or correction and the impact they may have individuals—and their ability to understand or challenge that decision.

The committee is widely regarded as successful and its reports are valued both inside and outside Parliament. It issues one or two major reports each year, ranging widely in topic. [57]

IMPACT

According to the parliamentary monitor by the Institute for Government, the Science and Technology Committee had the quickest government responses to their reports, taking just 36 days on average. [58] Our interviewee queried whether this was still the case and explained that a quick response did not always mean the Committee had had impact. . The government is obliged to respond, and the staff and Chair are keen on getting a response, but the quality of the response varies. When the committee receives a response from the Government, they colour-code it (which recommendations are accepted, not accepted, or not followed up upon). They give this as an internal paper to the MPs. The staff makes suggestions on follow up actions, such as more oral sessions, or asking the minister to the House, or asking questions in the House, using Twitter to mention the government is not following up on something to create pressure, etc.

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54   https://www.scienceinparliament.org.uk/publications/guide-to-science-in-parliament-and-government/
55   https://www.parliament.uk/business/committees/committees-a-z/commons-select/science-and-technology-committee/inquiries/?y=2017&mode=0
       - 18th Report - Digital Government (Published 10 July 2019)
       - 14th Report - Impact of social media and screen-use on young people's health (Published 31 January 2019)
       - 12th Report - Quantum technologies (Published 06 December 2018)
       - 4th Report - Algorithms in decision-making (Published 23 May 2018)
56   https://www.parliament.uk/business/committees/committees-a-z/commons-select/science-and-technology-committee/inquiries/parliament-2017/algorithms-in-decision-making-17-19/
57   Carmichael, P., & Dickson, B. (1999). *The House of Lords: Its Parliamentary and Judicial Roles*.
58   https://www.instituteforgovernment.org.uk/publication/parliamentary-monitor-2018/select-committees

Social media is used to engage the public. During one of the interviews, we saw a social media narrative on a specific report. It included a lot of pictures and short clips of public meetings. On social media reports are also tied to other reports or government policies, to get extra or renewed attention for (former) an inquiry.

During the interview, it was discussed that it is hard to know the impact. The government may accept a recommendation, but you don't know whether the government follows up on it straight away. And if it does, that does not mean this is solely thanks to your rapport.

The Commons S&T Committee has recently agreed to recruit a part-time impact manager to get a better insight into this.

The inquiry on research integrity, was very good, evidence-based, not too long a report, and the government has accepted the recommendations. This was a good example of agenda-setting.

Important impact factors according to our respondents are timing, the number of recommendations you are making in your report, the extent to which they are backed up by evidence, and the level of consensus (MPs can object to certain recommendations, which will then be stated in the report).

1.5   Lords Select Science and Technology Committee

ORIGIN & POSITIONING

The Science and Technology Committee of the House of Lords is considered a *topical*[59] committee. It scrutinises Government policy by undertaking cross-departmental inquiries into a range of different activities. The House of Lords appointed this committee in 1979.

The Science and Technology Committee has a broad remit "to consider science and technology". It scrutinises Government policy by undertaking cross-departmental inquiries into a range of different activities. These include:

- public policy areas which ought to be informed by scientific research (for example, health effects of air travel);
- technological challenges and opportunities (for example, genomic medicine); and

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59   Or investigative committee (sometimes known as sessional committees), which are renewed at the beginning of every session. The Science and Technology Committee is the only permanent investigatory committee operated by the House of Lords. See: Carmichael, P., & Dickson, B. (1999). *The House of Lords: Its Parliamentary and Judicial Roles*.

- public policy towards science itself (for example, setting priorities for publicly funded research).

In addition, the Committee undertakes from time to time shorter inquiries, either taking evidence from Ministers and officials on topical issues or following up previous work." [60]

The committee has several functions.

To inform; the committee chooses its own inquiries and produces reports which are suitable for debate in the House, and other committees. Thereby, it has a role in choosing topics to inform the government on.

To address; the committee can address specific topics because the government is obliged to respond to their publications. This gives them more influence than merely a report to inform. Although the recommendations are often directed towards the government, they can lead to certain reaction or agenda-setting in other committees also. The reports can be a base to ask questions in other debates.

To scrutinise; the Lords do not mirror government departments but play an important role in checking and challenging the decisions and actions of the government through questions and debates.

To advise; the committee's publications include recommendations. This together with the obligation of the government to respond to each of their recommendation within two months, leads to the potential to have a (significant) impact on the debate, questions and decision-making.

To coordinate; the committee works closely with the Commons Select Science and Technology Committee and POST.[61] This is mainly coordinated at the level of staff. There is little exchange on the level of committees, mostly for practical reasons. Besides, the committees in the Lords and Commons have different cultures and approaches. The House of Common's work tends to do shorter inquiries on topics that are current. The House of Lords tends to do longer inquiries into longer-term topics. POST is an important connecting link, and clerks of committees initiate meetings.

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60 https://www.parliament.uk/business/committees/committees-a-z/lords-select/science-and-technology-committee/role/

61 https://www.scienceinparliament.org.uk/publications/guide-to-science-in-parliament-and-government/

SET-UP & APPROACH

The Committee consists of 14 members, with representation from all parties as well as the crossbench peers (independents). Membership has generally been balanced between scientists and peers with an interest in science but with no specific scientific expertise. As of 6 November 2019, the Chairman of the committee was Lord Patel. He is a Crossbench Life peer who has sat under this title in the Lords since 1 March 1999.

As mentioned before, co-operation with the Commons Science and Technology Committee staff, and with POST, is close.[62] The clerks of both committees talk regularly and know what each other's Committee is working on. The level of coordination at committee level depends on the Chairs. Sometimes a new inquiry by one of the committees is like follow-up to previous work by the other committee. In general, the Commons take up issues that are more political and more urgent, and tend to have shorter inquiries. The reports from the Lords tend to be more in-depth and can contain more specialised recommendations. One of the interviewees had been told by a government official that they can have to prepare more thoroughly for Lords' evidence sessions, because the questioning is more in-depth. There is less of a political spectacle at Lords' evidence sessions. Chair

One of the interviewees explained that, on a current inquiry, the Lords S&T committee had a discussion with POST on which topics they were covering and to find suitable witnesses, and not just end up with the "usual suspects". There are also experts in the POST team who can advise on topics, help scope projects, and check pieces of writing (whether the staff has a correct understanding of things). However, on a practical level, the Lords team and POST are in different buildings, so there is less informal contact (than between POST and the Commons team), and staff make a conscious effort to stay in touch.

According to our interviewee, there is a bit of a culture that committee staff should be generalists. In the Lords, there are small teams of approximately 3 people. Clerks are usually focused on procedural matters and not an expert on a topic. They can have very different backgrounds, and usually do not know the subject matter, and are used to getting themselves a quick working knowledge. This means the culture is sometimes "we can do this ourselves". However, you can always get more informed, and reaching out to the POST can be very helpful in that regard.

RESULTS

The committee covers the many places where science meets public policy; as such it also scrutinises aspects of AI. Recently, there have not been inquiries on digital

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62 https://www.scienceinparliament.org.uk/publications/guide-to-science-in-parliament-and-government/

issues. Last year the committee engaged in an inquiry on forensic sciences, which included digital issues. Currently, they are working on an inquiry on aging. In this inquiry, there are also links to issues related to data in clinical trials, medical devices, how data can be combined to give better diagnosis and treatment.

Some inquiries are very short, very topical and political (science funding in universities), whereas others are longer (aging). The committee keeps track of a long list of topics, they can add to continuously. Based on the long list, they make a shortlist and they organise seminars to help them choose the next topics. .

Selection of previous reports:

- [Report: Life Sciences Industrial Strategy: Who's driving the bus? (PDF)](#)
  26 April 2018
  This report raises serious concerns about the Government's commitment to delivering the strategy which has so far been "wholly inadequate" and recommends there should be sweeping simplification of its implementation arrangements

- [Report: Connected and Autonomous Vehicles: the future? (PDF)](#)
  15 March 2017
  This report sets out recommendations for the Government to ensure it makes policy and investment decisions that enables the UK to receive maximum economic benefit from autonomous vehicles.

- [Report: Nuclear research and technology: Breaking the cycle of indecision (PDF)](#)
  2 May 2017
  This report states that we have reached a critical moment for the future of the United Kingdom as a serious nuclear nation, and sets out a series of recommendations for the new Government after the general election.

IMPACT

The Lords S&T Committee formally just reports to the House of Lords. However, the library in both houses lists relevant reports before a debate, to ensure members are up to date with all the relevant work from committees, POST, etc. It is also said that the influence of reports reaches beyond Parliament, with a long history of publications informing Government policy and raising awareness amongst the general public.

"Government responses are the first formal, explicit expression of the impact of the Committee's work upon Government thinking. While such responses are important, in reality, the impact of the Committee's reports may be felt less directly and over much longer periods. The Committee also contributes to the formation of policy through follow-up inquiries on many topics, often involving many of the original

members who took part in the initial inquiry, providing long-term scrutiny of Government policies." [63]

In June 2019 the Liaison Committee published a Summary of House of Lords investigative and scrutiny committee activity in 2018–19. [64] This report says:

"The Science and Technology Committee continues to engage a wide audience through Twitter, with 57,800 followers as at April 2019. Engagement has been almost all positive, with one Twitter user praising the committee for "listening, challenging and discussing [forensic science] so thoroughly. The Committee has sought to increase engagement with science issues among other members of the House, with the introduction of peers' seminars on scientific issues, the first of which covered the threat of global emerging infections. This was followed by a seminar on the science of aging." [65]

During the interview, important success factors were discussed. The respondent argued that things have been very different lately because the government and parliament have been very concerned with Brexit. Lots of reports are not debated yet. There is a timely reaction from the government, but especially the debate is a good moment to hold the government to account because the Minister might make commitments in response to points from Peers in the debate. .

Not only the debate, but long term follow-up is very important as well. 1-2 years after the report has been published, it is good to ask the minister to give an update, follow up on the recommendations. This does not happen as often as it should and it depends a lot on the topic.
The extent to which the outside world is interested in the topic is also an important factor. And, it matters how much the committee wants to try and get attention. It has some value and status on its own; when parliament sets up an inquiry or publishes a report. But there are also lots of think tanks and universities who put topics on the agenda. A report from parliament can boost the impact of the work of others, and the work of organisations outside parliament can help add pressure on the government. It is all about creating momentum.

Still, it is hard to prove the impact of individual reports and determine the success of the Lords committee on S&T. The reports are quite in-depth and mostly appreciated within the domain. The report on forensic science examined all kinds of problems in

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63 https://www.scienceinparliament.org.uk/publications/guide-to-science-in-parliament-and-government/
64 https://publications.parliament.uk/pa/ld201719/ldselect/ldliaison/369/369.pdf
65 https://publications.parliament.uk/pa/ld201719/ldselect/ldliaison/369/369.pdf

the sector and was considered excellent and very embarrassing for the government. In a normal year, this report would have forced the government to make rapid changes, but the focus on Brexit (and its impact on Parliamentary time) mean that the issues will have to be raised again later. .

1.6 Lords Select Committee on AI

ORIGIN & POSITIONING

In the United Kingdom, there are also temporary Lords Committees that focus on specific digitalisation issues and cease to exist after having reported on their topics.

The Lord Select Committee on AI is an ad hoc (later special inquiry) committee of the House of Lords. The committee was established following the recommendation of the Liaison Committee.[66] On 29 June 2017, it was formally appointed to consider the economic, ethical and social implications of advances in artificial intelligence, and to make recommendations.

For the 2017-2018 Session, the Liaison Committee received a total of 37 submissions. This included a proposal by Lord Harris of Harringey (and supported by Lord Giddens) to consider "The Implications of Artificial Intelligence for UK Society and the Measures that should be taken by the Government to Respond to Developments in Artificial Intelligence".[67] This letter touches upon the effects of AI on a wide range of sectors, the substantial societal changes facial recognition technology is likely to bring about, ethical questions and issues about legal liability and insurance, and concerns about individual's privacy rights and transparent use of data. It is argued that the new ad hoc committee provides the opportunity to complement the report "Robotics and Artificial Intelligence" [68] produced by the Commons Science and Technology Committee with a fuller enquiry "lasting a year with perhaps some twenty oral evidence sessions allowing some in-depth consideration of the range of issues presented by the topic". [69] Moreover, it is stated: "The topic crosses many Departmental boundaries: BEIS, HMT, MoD, DoH, DfE, DfT, HO, DWP and DCLG all have an interest. The inquiry will not only have the opportunity to look at the technical and scientific issues, but the ethical

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66 2nd Report of Session 2016-17 - published 21 March 2017 - HL Paper 144
     URL: https://publications.parliament.uk/pa/ld201617/ldselect/ldliaison/144/14402.htm
67 All proposals URL :
     https://publications.parliament.uk/pa/ld201617/ldselect/ldliaison/144/14410.htm#_idTextAnchor018
68 Science and Technology Committee, Robotics and Artificial Intelligence (Fifth Report, Session 2016–17 HC
     145)
     URL: https://publications.parliament.uk/pa/cm201617/cmselect/cmsctech/145/145.pdf
69 Committee proposals from Members of the House, Letter from Lord Harris of Harringey. URL :
     https://publications.parliament.uk/pa/ld201617/ldselect/ldliaison/144/14410.htm

questions posed by the technology, along with the impact on industrial strategy, employment and training, and on the public finances. There will be issues for defence, health, education and skills, transport, security and policing, social security, and local government." [70]

On 21 March 2017 the Liaison Committee published a report and recommended four new investigative committees; including an ad hoc select committee on Artificial Intelligence. It is motived as follows: "This [artificial intelligence] a topical issue, given the ongoing pace of technological advances. While there are a number of interesting angles which the Committee might focus on, ranging from the rate of technological change, to economic and social issues, and even ethical issues, with some careful planning it is a topic which could be conducted within one session. It is also an issue that would not fit neatly within the remit of any existing Commons or Lords committee. A committee which considered technological issues alongside implications for the labour market and the ethical dilemmas posed by artificial intelligence would have the potential to add value in this area by considering the issues in the round. There is a range of expertise in the House in the various areas to be examined."[71]

The Lords Select Committee on AI was established to undertake one specific inquiry and dissolved after publishing its report. The committee, therefore, had mainly an **informative** function. The main audience and users of the report are the government, but also people inside and outside parliament benefitted from the inquiry. The inquiry provided a knowledge base but was also aimed at monitoring/scrutinising government activity on the topic. It has an **advising** function in the sense that it provides recommendations to the government. In this regard, it also has an agenda-setting/**addressing** function; it identified issues that require government attention. The committee has a **coordinating** function in the sense that it reached out to other committees, MPs and government officials to exchange information. However, this was all informal and initiated by ambitious individuals. The clerk of the committee, for instance, had an informal talk with the Committee on S&T when he learned they were starting an inquiry on algorithms. The clerk asked the committee to drop it until the Lords committee would publish their report. As a permanent committee, it is beneficial if they come after. Moreover, they had only had 2-3 evidence sessions by then and the Lords Committee had done much more. A letter was sent to the S&T committee to ensure they would not publish their work on the same day. Consequently, they had the opportunity to adjust their report based on the Lords' report. For instance, it is important to not have conflicting

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70 Ibid.
71 2nd Report of Session 2016-17 - published 21 March 2017 - HL Paper 144
        URL: https://publications.parliament.uk/pa/ld201617/ldselect/ldliaison/144/14402.htm

recommendations because then the government will take the path of the least resistance and go with the easiest recommendations.

SET-UP & APPROACH

"Ad hoc committees consider a specific issue for a single parliamentary session, or for around 12 months in a two-year session. Some ad hoc committees are tasked with conducting post-legislative scrutiny of a piece of legislation, such as the committee currently scrutinising the Bribery Act 2010. These committees are normally dissolved once they have reported." [72]

The Liaison Committee recommends an *ad hoc* committee on AI could take evidence on the arguments of the 'techno-optimists' versus the 'techno-pessimists' on the following topics:

- Pace of technological change
  - Relationship between developments in artificial intelligence and productivity growth;
  - Creation of new jobs;
  - Sectors and occupations most at threat from automation.
- Economic and social issues
  - The role of Government in the event of widespread job displacement;
  - Further education and training, for both children and adults;
  - Unemployment support, including the case for a universal basic income;
  - Government funding for artificial intelligence-related research and development.
- Ethical issues
  - The Government's role in monitoring the safety and fairness of artificial intelligence;
  - Transparency around the use of 'big data';
  - Privacy rights of individuals;
  - General principles for the development and application of artificial intelligence.

There are 13 members (appointed on 29 June 2017). The committee meets in private, makes visits (e.g. the committee visited DeepMind), and there are public evidence sessions.

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72 https://www.instituteforgovernment.org.uk/publication/parliamentary-monitor-2018/select-committees

In the interview, it became clear that many Lords wanted to be on board for this special inquiry committee. It is not always like this. The Lords are quite far from daily policy, but AI was considered a hot and serious topic. The Chairman of the Committee, Lord Clement Jones, was a managing partner at a law firm. As mentioned before, the Chairman is a very important figure as he/she defines the inquiry. This particular Chairman had a lot of influence as he was involved in the planning, and exchanging literature lists in a very early stage.
The committee was supported by a staff team of three and structured the process. The committee benefited from the personal contacts between staff and MPs for exchanging information. Also, the members (Lords) were very engaged; they all brought in their ideas and different perspectives. The staff listed the questions the members raised, and ultimately, all 75-80 questions were answered in the final report.

An important aspect of the approach is that every member saw every piece of evidence. The staff controlled the lobby and the members' access to information. All questions were sent to the clerk. This was necessary as organisations, such as Google, were seeking to contact members individually. The staff reassured information was taken up only when the whole committee was present. In addition, they arranged working visits and workshop, for instance, to build a neural network. The visualization really helped the members to get a better grip on the subject matter. There were optimists and pessimists, but everyone ended up with the same understanding of AI and it became a very open committee.

"The Committee received 223 pieces of written evidence and took oral evidence from 57 witnesses during 22 public sessions. The Committee undertook visits to businesses working with AI (including to DeepMind and Microsoft Research) and, with techUK, convened a roundtable discussion with UK-based companies developing artificial intelligence. The Committee also took the unusual but welcome step as an ad hoc committee of setting up its own Twitter account for the duration of the inquiry (@LordsAICom). The account rapidly gained attention, ending with 3,316 followers. A presence on social media helped to encourage more written submissions, and the account was used to provide guidance on how to prepare and submit evidence to Parliament. By having its own account, the Committee was able to engage with the AI development sector, and those interested in technology, in a more direct way than would have been possible using the main corporate account. For example, the AI Committee directed the staff to adopt a light-hearted tone in its use of Twitter."[73]

73 3rd Report – Review of Investigative Select Committee activity in 2017-2018 (published 19 July 2018)
     URL: https://publications.parliament.uk/pa/ld201719/ldselect/ldliaison/166/166.pdf

RESULTS

The final report from the Committee was originally scheduled to be published by the end of March 2018. On 16 April 2018, the Committee published a 183-page report, "AI in the UK: ready, willing and able?" which considers AI development and governance in the UK. In addition, the written and oral evidence volumes were published two days later.

"The report noted that the UK contains leading AI companies, a dynamic academic research culture, and a vigorous start-up ecosystem as well as a host of legal, ethical, financial and linguistic strengths. It concluded that the UK is therefore in a strong position to be among the world leaders in the development of artificial intelligence. The Committee also concluded that ethics must be at the centre of the development and use of AI, and the report recommended the development of a cross-sector AI Code. The Committee's recommendations focused on realising the potential of AI for society, the UK economy, and to protect society from potential threats and risks." [74]

Or, as summarized on the website of the Future of Life Institute:

> "[…] the Committee published a 183-page report, "AI in the UK: ready, willing and able?" which considers AI development and governance in the UK. It acknowledges that the UK cannot compete with the US or China in terms of funding or people, but suggests the country may have a competitive advantage in considering the ethics of AI. […] The Committee report encourages the UK to establish a national AI strategy and proposes an "AI Code" with five principles:

1. Artificial intelligence should be developed for the common good and benefit of humanity.
2. Artificial intelligence should operate on principles of intelligibility and fairness.
3. Artificial intelligence should not be used to diminish the data rights or privacy of individuals, families or communities.
4. All citizens have the right to be educated to enable them to flourish mentally, emotionally and economically alongside artificial intelligence.
5. The autonomous power to hurt, destroy or deceive human beings should never be vested in artificial intelligence."

In June 2018, the government responded to the report's recommendations in a 41-page document.[75] The government's response highlights many of the UK's

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74 3rd Report – Review of Investigative Select Committee activity in 2017-2018 (published 19 July 2018)
     URL: https://publications.parliament.uk/pa/ld201719/ldselect/ldliaison/166/166.pdf
75 https://www.parliament.uk/documents/lords-committees/Artificial-Intelligence/AI-Government-Response.pdf

intentions and recommendations for managing the development of AI moving forward."

IMPACT

"On the day of publication, the Committee held an event at the Royal Society with policymakers, industry and academia to discuss the findings of the report, and to ensure that the AI community in the UK could take forward the Committee's recommendations to Government and beyond. The report received widespread attention in the media, with coverage in every major domestic newspaper, the technology sector press, as well as from media abroad. The report's hashtag, #LordsAIreport, trended on Twitter nationally for much of the morning of the report's publication day. The Secretary of State for Digital, Culture, Media and Sport said in the chamber of the House of Commons that the report "was one of the best reports by a Lords Select Committee I have ever read, so we [the Government] are taking it extremely seriously."[76]

"The report of the Select Committee on Artificial Intelligence, published in April 2018, has been very well-received by Government, academia, business and civil society alike, both in the UK and abroad. The recommendations the Committee made have been discussed by the United Nations, the governments of Canada, Japan and the United Arab Emirates (UAE) among others, and a wide variety of organisations, including the Law Commission. The Centre for Data Ethics and Innovation has considered the report's recommendations as part of its founding consultation process, and two former Committee members have been appointed to its board." [77]

During the interview, several factors that contributed to the success of this committee were discussed. First of all, it was beneficial that both the members and the staff had time and willingness to emerge themselves in the topic. There were optimists and pessimists, but everyone ended up with the same understanding of AI and it became a very open committee.

The committee greatly benefitted from the three very switched on members from the Conservative Party, a very successful businesswoman, who had lots of contacts, and a very engaged Brexiteer always asking people on AI. In addition, there were four scientific experts to brief the committee on robotics, AI, algorithms, etc. So the committee could ask all kinds of questions. One of them became a

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76 3rd Report – Review of Investigative Select Committee activity in 2017-2018 (published 19 July 2018)
    URL: https://dublications.parliament.uk/pa/ld201719/ldselect/ldliaison/166/166.pdf
77 Summary of House of Lords investigative and scrutiny committee activity in 2018–19 (published 10 June 2019)
    URL: https://publications.parliament.uk/pa/ld201719/ldselect/ldliaison/369/369.pdf p. 19-20

specialist advisor. This person was a computer scientist with no knowledge of policy, but the Chairman could compensate for that.

Another success factor is that the report is written in an engaging way. It was the first report which brought everything together. There were already different reports by different consultants, but the government was only doing still little trips and dips. The government came out with a GDPR report, so everyone has focused on data already. It was simply perfect timing. There was also lots of media attention, and the Committee S&T referred to the report. Also today, the committee on AI stills gets lots of follow up requests.

There had been a lot of informal conversations between the committee staff and government officials/civil servants. The staff was asking them during the process of the inquiry what they wanted or needed. They were looking for what the government thought it needed and tried to address this in the recommendations. Usually, the government tends to listen better to Commons committees. There is some professional rivalry between Lords and government. But the government was very kind to the Lords Committee on AI. The government really took up the report: departments look at every stage of life (growing up with AI, Living with AI, etc.). This is the result of how the report was build up; there is a chapter for every department on purpose, and it included enough decent recommendation; everyone could do something immediately. There were also some 'big' recommendations (regarding a legal framework, for instance), to make the government accept the smaller recommendations.

1.7 Lords Select Democracy and Digital Technologies Committee

ORIGIN & POSITIONING
The Lords Select Committee on Democracy and Digital Technologies is a special inquiry committee (formerly called ad hoc committee), established on 13 June 2019 following the recommendation of The Liaison Committee.[78]

The Liaison Committee received 27 proposals for a special inquiry by the 20 December 2018 deadline.[79] This included a letter 'Democracy and digital

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78 4th Report of Session 2017-19 - published 18 March 2019. URL:
    https://publications.parliament.uk/pa/ld201719/ldselect/ldliaison/309/30902.htm
79 All proposals are were published online on 10 January 2019. See :
    https://www.parliament.uk/business/committees/committees-a-z/lords-select/liaison-committee/news-
    parliament-2017/special-inquiry-committee-proposals/

technologies' by from Baroness O'Neill of Bengarve, and 'Do digital media threaten our democracy?' by Lord Lipsey.[80]

O'Neill of Bengarve says: "Nobody I have spoken to can offer a definition of what constitutes a 'political advertisement' that is coherent or useable. Few understand the business models of the tech companies, or how these enable distortion of media coverage and leach political power (and, of course, tax revenue) from other institutions, thereby weakening the possibility of democracy. The tech companies are now keen to limit some of the private harms inflicted using digital technologies—e.g. cybercrime, cyber bullying,—but markedly less keen to reduce public harms, whether to serious journalism, to wider cultures or to democratic politics, by use of these technologies."

She argues: "The inquiry should aim to identify the more significant ways in which digital technologies are used to undermine media standards, other cultural assets and democratic process. It should address the (mis)use of arguments from free speech to cloak electoral activity by unidentified parties; it should consider the impact and acceptability of micro-targeting electors."

Lipsey, on the other hand, explains that the earlier Committee on Opinion Polls which he chaired was not able to consider digital media and politics. He proposes to investigate: "the extent to which state entities are using digital media to try to influence the politics of other states; legal and regulatory structures in relation to digital and social media; the extent to which media literacy can address problems with digital media; how political advertising can be identified and the sources of funding traced; the influence of digital, social media and data analytics companies." On 18 March 2019 the Liaison Committee published a report and recommended four new special inquiry Committees; including a special inquiry committee on democracy and digital technologies.[81]

In their report from March 2019, it is mentioned that the impact of online political campaigning (e.g. the use of social media for the dissemination of political messaging, data analytics and micro-targeting) on our democratic processes has come under increasing scrutiny. Also lots of recommendations for more regulation and intentions to tackle issues have been formulated:

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80 https://www.parliament.uk/documents/lords-
    committees/liaison/Special_Inquiry_Committee_Proposals_for_2019%e2%80%9320.pdf
81 4th Report of Session 2017-19 - published 18 March 2019 - HL Paper 309
    URL: https://publications.parliament.uk/pa/ld201719/ldselect/ldliaison/309/30902.htm

- In January 2018 the Digital Charter of the UK Government got out and set out priorities including the legal liabilities of online platforms and limiting the spread of disinformation.
- In April 2018 the Lord Select Political Polling and Digital Media Committee[82] reported on their research and recommended that an ad hoc committee be established for further scrutiny of the wider topic.
- In July 2018 the Information Commissioner's Office[83] made recommendations to the Government about imposing regulations, stronger oversight, and measures for sites of digital platforms.

However, it is argued that more work is needed to offer detail of how these regulations could be put in place and be used effectively in practice. The special inquiry could be seen as a response, and a wish to consider the extent of the harm caused by digital media to politics and political campaigning, the suitability and possible efficacy of earlier recommendations, the progress towards implementation of any of these recommendations, and alternative policy responses.

The Lords Select Committee on Democracy and Digital Technologies undertakes one inquiry and will be dissolved after publishing its report. The committee, therefore, has mainly an **informative** function. The main audience and users of the report are the government, but also people inside and outside parliament. The inquiry is about creating a knowledge base but also directed towards **scrutinising** the government; how earlier recommendations have been taken up. It has an **advising** function in the sense that it will give recommendations again to the government. This also means it has an agenda-setting/**addressing** function to identify issues/challenges.

In one of the interviews it was argued that the committee is not informing, but advising the government, although the government would loathe to say that. The recommendations sometimes really help the government, as was the case with the Special Inquiry on AI. Also another special inquiry, on seaside towns and problems related to drugs and poverty, was very successful, especially because it looks across all kinds of departments. The latter report showed the agenda-setting role of the committee was very effective.

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82 Appointed on 29 June 2017
    URL : https://www.parliament.uk/business/committees/committees-a-z/lords-select/political-polling-digital-media/role/
83 The ICO is an independent public body and the Department for Digital, Culture Media and Sport is the ICO's sponsoring department within Government. See: https://ico.org.uk/about-the-ico/who-we-are/relationship-with-the-dcms/. They published the report "Democracy disrupted?" in July 2018 (URL: https://ico.org.uk/media/action-weve-taken/2259369/democracy-disrupted-110718.pdf

The committee has a **coordinating** function due to the topic of the inquiry; it aims at connecting previous inquiries and follows-up on earlier recommendations. This means they keep an eye on the work of the DCMS committee, and they are directed towards multiple government departments. In practice, this takes place mostly on the level of staff; they check with other committees the agenda's and priorities. The coordination is, according to our respondents, something that could be improved in the Lords. There is no structure or formal organisation and the staff have good relationships but are usually too busy with organising the evidence sessions. The committee itself is more directed towards what the Chairman wants, and less to what other committees do, did or desire. This is the case in the House of Lords as well as in the Commons. Finally, the cooperation between the Lords and POST could be better, according to our interviewee. POST helps with sending out the call for evidence to science origination; they mostly contribute at the beginning, to get the right expertise quickly.

SET-UP & APPROACH

During the interview, it was clarified that the members of the committee are self-selected. The members involved are members interested in the topic. In this case, only 3 of the 14 members are women. The members are from different parties; 4 Conservatives, 4 Labour, 2 Liberal Democrats and 2 crossbenchers. 2 or 3 of the members were also involved in the special inquiry on AI.

The perspective of the Chairman on the subject matter is very decisive. In this case, the Chairman aimed at putting forward a more positive view: how can we support representative democracy in a digital world? Other reports have focused on the negative side or threats of technologies and the general tone has been quite negative. The Chairman wants to be more realistic and direct the attention towards the opportunities for the people and democracy. The Lords' inquiries focus on the long term perspective. And this particular inquiry takes a cross-cutting approach; it looks at different aspects/domains.

The staff is a team of three: a clerk, policy advisor and an assistant. In addition, the committee hires specialist advisors to get extra expertise. They are paid by the day and are mostly from academia. They spend, for instance, one day a week: half a day for the committee meeting and reading and feeding in on the briefings. The special advisor will check the report also. One of the specialist advisors who contributed to this committee analysed 14 reports over the summer and took out all the recommendations and government responses (why the government responded or not, etc.). The staff usually does not have time to do this, but it is very helpful to get such insights.

As the Call for Evidence, published on 22 July 2019 clarifies: "The Committee has decided to focus on the issue of how representative democracy can be supported, rather than undermined, in a digital world. It will primarily look across six key areas: transparency in political campaigns; privacy and anonymity; misinformation; the effects of digital technologies on public discourse; how technology can facilitate democracy and the development of effective digital literacy."[84]

With the call, the House of Lords Select Committee on Democracy and Digital Technologies aims to encourage people to share their views, guided by 14 questions. Besides the call for written evidence, the committee also sends special invitations to a number of charities, businesses, academia and government to ask for their views on the topic. The staff has an important role in processing the written evidence. They got 100 pieces of written evidence, and the quality varies. Some pieces, from big organisations such as Google, are very good. 15 pieces of evidence came from citizens. Their contributions can be weighty, but the quality is usually less. This also has to do with the limited time; people have approximately 6-8 weeks to respond to the call for evidence.

The members (Lords) do not read everything. They do not have a lot of time to spend on preparation. Usually, they meet once a week. Because of planning issues, they now meet twice a week to get all the hearings done. The staff has an important role in processing the evidence. Based on the written evidence, they produced briefings and come up with people to invite for oral evidence sessions. During the interview, the clerk explains it is important to aim for more diversity in the oral evidence sessions. They now try to get away from the usual suspects and set up a working group in the office to work on this. For example, when you send an e-mail to a large organisation, they include something like: "Diversity is important to us, so please take this into account. We offer 'juniors' a proper briefing before the session, so they know what to expect and feel prepared."

The Lords are prepared for the oral evidence sessions by a briefing. Attending the hearings is a very effective way for them to get informed. However, some of the members felt that their own expertise was used insufficiently during the hearings. Before anyone comes in, they now established to take half an hour of discussion amongst themselves on the evidence. The staff prepares them a bio of the speaker, a list of questions, and set a clear set goal for the session. Each question is provided with a one-page briefing. For some questions, the staff asks for feedback from expert members or external specialist advisors.

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84 https://www.parliament.uk/documents/lords-committees/Digital_democracy/Digital_Call_for_evidence.pdf

RESULTS

The inquiry is not concluded yet. The deadline for submissions of written evidence was 20 September 2019. All accepted submissions to the call for evidence can be found on the committee's website. So far there are 75 pieces of written evidence, and 6 oral evidence.

The Chairman of the Lords Committee on Democracy and Digital Technology, Lord Puttnam, explains: "Our inquiry can only be as good as the quality of the evidence we receive. The support and expertise of parliamentarians will be essential if our committee is to set out a vision to the Government of the type of fair and inclusive democracy the UK deserves in the digital era."

The final report from the Committee was originally scheduled to be published on 31 March 2020. However, due to the elections and planning issues the deadline is now end of June.

IMPACT

Members are not experts on the subject, but by the time the committee is over, they are. However, one issue that influences the impact of the committee is that it only exists for a short period of time. Getting people to know that the committee exists, can be very challenging. Usually, the Commons Committees get more with their inquiries, so it is difficult to compete.

The Lord reports are valued; they have a reputation of being of high quality. However, it is hard to carve out a different identity as a committee and to make sure not only academics who work in the field are interested. According to our interviewees, the reports are mostly appreciated by academia, think tanks and charities (not by government and MPs). MPs do not like to get advice from the Lords, and Parliament does not have to respond. The recommendations are always directed towards government. It is the Liaison Committee which puts forward recommendations for parliament, about working together, or priorities for inquiries.

The government does have to respond to the Lords' reports within two months, but the quality of the response is not always very good. They have to respond to each recommendation individually, but they can be very vague (or they just say "no, we won't do this" or "This is a good idea, but were are already doing this"). They never really credit it to a committee, so it is hard to assess the impact. Also, it can take quite a while before the debate with the government on the report is scheduled.

Another factor that affects the impact is whether political parties back up the message of the report. In a previous special inquiry, this was a problem. The report

is only decided upon by the 12 members involved. The whipping system in the Lords is not really there, so they do not discuss the content with the fractions much.

Also, the enthusiasm and commitment of the Chairman is very important. The current Chairman is very much liked and appreciated in the House. He engages in lots of interviews and is great with the staff. The current Chairman is also already worried about the follow up on their work. He asked the clerk to ring universities and ask them to follow up on their report. Chairmen feel responsibility, also after the committee has been dissolved. The Chairman of the Lords Committee on AI is also still very active.

1.8   POST

ORIGIN & POSITIONING

The Parliamentary Office of Science and Technology (POST) is Parliament's in-house source of independent, balanced and accessible analysis of public policy issues related to science and technology.

The initiative to create POST came from within Parliament itself. Members of both Houses realised during the late 1970s and early 1980s the extent to which science and technology issues permeated Parliamentary business. The need for an organisation which would provide Parliament with impartial information and analysis of science and technology issues became clear.

A funding appeal by the Parliamentary and Scientific Committee enabled POST to be established as a charitable foundation in 1989. Following three years' demonstration of the services that could be provided, the case for its parliamentary establishment was reviewed by the House of Commons Information Committee during the 1991/2 session. Temporary funding from Parliament continued until in July 2000 the House of Commons Information Committee concluded that POST had demonstrated its value and should be made a permanent institution. The House of Lords concluded similarly. On April 1 2001, POST became a permanent institution serving both Houses.[85]

SET-UP & APPROACH

POST's Board is appointed by official parliamentary procedures and has 14 members from both Houses (many of whom have been active scientists or engineers), from all the major parties. There are also four distinguished non-

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85 https://www.scienceinparliament.org.uk/publications/guide-to-science-in-parliament-and-government/

parliamentary members who provide professional input from the main science, engineering and medical disciplines. The Board determines POST's policy and priorities and ensures that it has an effective working relationship with members of both Houses, parliamentary committees, the parliamentary libraries and organisations outside Parliament. POST's Director and staff execute the policies determined by the Board and help it to decide on topics for future analysis.

POST works very closely with committees in both Houses. Currently, the DCMS Committee and the S&T Committee are most interested in the work of POST. POST has assisted virtually all the Commons committees as well as the Lords European sub-committees and Economic Affairs Committee and ad-hoc committees, including joint committees of both Houses. POST's assistance can be through oral briefings and various kinds of background research, including extensive follow-up of a committee's report. Work in collaboration with a committee may lead to a publication.

POST is an active member of the European Parliamentary Technology Assessment network (EPTA), as is the Rathenau Instituut. EPTA brings together organisations that advise parliaments on the possible social, economic and environmental impact of new sciences and technologies.

POST provides parliamentarians with information and analysis to enhance their understanding of current scientific and technological issues. It responds to such needs, whether they reflect a general requirement or the specific interests of committees. POST places a strong emphasis on anticipating forthcoming policy issues, whose effective handling will require an understanding of their scientific and technological aspects. POST draws on the knowledge, expertise and talents of its parliamentary and external Board members and its staff but also connects with the science and engineering community worldwide. POST acts as an independent and objective source of information and analysis.

RESULTS

There have been a lot more requests on the topic of digitalisation recently. About 1/6 to 1/4 of POST's work is on digital issues now. Physical sciences is also big. And it depends on the board.

POST produces different types of publications. The most numerous and distinctive are 2-4 page briefings, called POSTnotes that summarise succinctly the background to, and policy issues affecting a particular subject. The POSTnotes are proposals from POST and are based on the horizon scanning exercise. They report on topics that will hit next year policy. In addition, there are so-called POSTbriefs which are commissioned by committees or Library sections. POSTbriefs don't have

a word limit so they tend to be longer – but are intended to be strategic evidence reviews commissioned by committees or libraries. All POST publications are extensively peer-reviewed in draft to ensure their accuracy and completeness.

POSTnotes sends out to all MPs personally, both by email and a hard copy. They are meant to spark questions and inform briefings. The library works on briefings on what the views are in society (e.g. this one is saying this, and this one is saying that), while POST is doing the scientific reviews.

The horizon scanning approach has changed last year, in order to better engage with external stakeholders. There are workshops and POST is crowdsourcing articles from experts (mostly academics). This works somewhat similar to a call for evidence, but they ask a smaller and more specific group of experts to upload articles that might be of interest to MPs.

Examples POSTnotes
610: Misuse of Civilian Drones (7 pages)
Drones (also known as unmanned aircraft) are flying systems that do not carry a pilot. As the technology has become cheaper and more sophisticated, the use of drones for recreational and commercial purposes has grown, with the Civil Aviation Authority (CAA) reporting a significant increase in the number of permissions obtained for operating commercial drones in the UK. Despite their potential to reduce costs, improve efficiency and provide new services, drones may be misused accidentally or for malicious purposes. For example, reports of drone sightings at Gatwick Airport in December 2018 grounded around 1,000 flights for almost 36 hours, affecting more than 140,000 passengers. In 2018, the Government introduced new limits on where drones can be flown and new registration and education requirements for drone operators and pilots. In January 2020, the new Government introduced an Air Traffic Management and Unmanned Aircraft Bill to Parliament that included new police powers for enforcing aviation laws (such as the power to issue a fixed penalty notice for certain drone offences). This POSTnote looks at civilian drones and their applications, focusing on potential misuse and possible responses.

593: Cyber Security of Consumer Devices (6 pages)
Weaknesses in the cyber security of internet-connected consumer devices can undermine the privacy and safety of individual users and can be used for large-scale cyber-attacks. This briefing looks at the cyber threats associated with consumer devices and their causes, as well as initiatives to improve device security, and the related challenges.

591: [Robotics in Social Care](7 pages)
This POSTnote introduces robotic technology and the main ways it has been developed for use in social care. It reviews evidence on the impact of robotics on the costs and quality of social care and its workforce, and explores the main ethical, social and regulatory challenges to its use in social care.

Examples POSTbriefs
2: [5G technology](28 pages)
5G is the next generation of mobile communications technology. It follows on from the previous generations of mobile technology, such as 3G and 4G. 5G is expected to improve on previous mobile technologies by providing faster, lower latency (response time) mobile broadband connections and being able to connect a greater number of devices to a mobile network in a particular area while maintaining good quality connections. 5G mobile broadband will be the first widespread application of the technology. However, in the longer term it may have applications in other sectors.

28: [Distributed Ledger Technology](16 pages)
Distributed ledger technology (DLT) is a type of digital records system that allows multiple identical copies of a ledger to be stored on different computers on a network and updated by multiple different users. This POSTbrief provides a technical overview of the different types of DLT and how they work. It discusses some of the main applications of DLT and highlights the benefits and challenges of the technology.

Example Horizon Scanning
2019: [Preparing for a changing world](100 pages)
(incl. the digital divide, internet governance, emerging computer technologies, trends in transport technologies)

IMPACT
POST helps inform MPs and aims to plug in with scientists at an early stage for every inquiry. The aim is to have good evidence synthesis at the start of an inquiry, so POST needs to know which inquiries committees are going to do. The Liaison is also paying attention to this; there are special sessions with members from every committee to talk about new methods for more robust procedures.

2   Germany

2.1   Introduction

The *Bundesrat* (the federal council – the German upper house) has 16 permanent or standing committees.[86] None of these committees is particularly dedicated to the theme of digitalisation; the policy area in which issues regarding digitalisation arise determines the committee where these issues are being discussed. The distribution of tasks of the committees essentially corresponds to the division of responsibilities of the federal ministries.

In this study we will focus on the Bundestag (the federal parliament – the German House of Representatives) which has currently 26 permanent committees. The permanent committees in de Bundestag are newly appointed and differently composed each electoral term. The Bundestag does not have a completely free hand when setting up these bodies, since some committees are provided for by the Basic Law and others have to be set up as a result of certain statutory formulations. These committees include, for example, the Petitions Committee and the Defence Committee. In organisational terms the committees largely mirror the structure of the Federal Government. As a rule, the Bundestag establishes one specialised committee for each ministry. In addition to this, Parliament can give prominence to particular areas of policy – to underline the societal relevance of an issue – or divide the workload of existing committees by setting up additional committees. An example of this is the foundation of the Committee for the Digital Agenda which has been here for two electoral terms now. Parliament can also establish special bodies such as parliamentary advisory councils, committees of inquiry or study commissions. An example of the first is the Parliamentary Advisory Council on Sustainable Development.[87] An example of the last is the Study Commission on Artificial Intelligence which will be addressed in this chapter.

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86 You can find the list of committees on
https://www.bundesrat.de/DE/bundesrat/ausschuesse/ausschuesse-node.html.

87 This advisory council has the task to appraise whether the Federal Government adequately fulfils its obligation towards projects and if they are in keeping with sustainable development. The council submits the result of its appraisal to the German Bundestag's lead committee for the particular project in the form of an Expert Opinion, which the latter incorporates in its report. The appraisal is performed by the competent rapporteurs of the parliamentary groups – one rapporteur from the coalition and one rapporteur from the opposition. The appraisal is performed with the help of the 17 global Sustainable Development Goals (SDGs) and the Principles of sustainable development and Indicators of the German Sustainable Development Strategy – 2018. See https://www.bundestag.de/resource/blob/562816/1543c7ad962dce81149bcf9f29d46c6e/verfahren sordnung-data.pdf.

Committees in the Bundestag are considered strong. The Rules of Procedure refer to the committees as ''bodies responsible for preparing the decisions of the Bundestag''. The building where the Committees are seated is called the 'motor block' of the Bundestag. Committees consider all items referred to them by the plenary, especially bills. They also have extensive rights to take up an issue on their own initiative (not referred to them by the plenary). The committees may also recommend that ''their'' ministers take specific measures. Their right to take up matters on their own initiative has become an important tool in scrutinising the work of the ministries. Other instruments to scrutinize the government are mostly like the ones in the Dutch Tweede Kamer, written and oral parliamentary questions, debates on matters of topical interest and committees of inquiry.

Public bills pass three readings before a decision will be taken into force. Draft legislation is mostly written by the government. These drafts are then submitted, after a first reading, to one responsible committee. Due to legislative complexity, other committees are asked to give professional advice to the leading committee – if they are affected by the concerned policy issues (without having the competence to bring up any formal resolutions). After considering the legislation, the lead committee usually submits a recommendation for a resolution which summarises the discussions in the committee.[88] The plenary relies heavily on this recommendation for its final votes. The members of the committees thus perform a significant part of the technical work in the legislative process.

To prepare its work, each committee may, from among its members, form subcommittees for specific tasks, unless one third of its members object. Subcommittees are set up either to consider a specific bill or problem, or to deal with certain areas of the committee's remit for an entire electoral term. For example, the Bundestag Committee on Culture and the Media set up a subcommittee on new media in the 15th and 16th parliamentary term (the 19th term is running now). It is also possible for several committees to establish a joint subcommittee, in particular to deal with cross-cutting issues. So far, this has not been done with issues on digitalisation.

For the purpose of this study we will limit our focus to two permanent committees: Committee on the Digital Agenda and the Committee on Education, Research and Technology Assessment (incl. TAB: The Office of Technology Assessment at the German Bundestag). In addition, we will discuss the Enquete-Kommission (study

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88 Often, a committee must consider a number of different bills and motions relating to the same issue, e.g. one from the government or the parliamentary groups making up the governing coalition, one from the opposition and one from the Bundesrat. In such cases, the committee decides which text it will take as the basis for its deliberations.

commission) "Artificial Intelligence Social Responsibility and Economic, Social and Ecological Potential".

Support staff

The Bundestag has quite some resources at his disposal for supporting the 709 Members of Parliament in their work. There is the Administration of the Bundestag, which by now employs about 2,850 people. The Administration of the German Bundestag is divided into four directorates-general: Central Services; Parliament and Members; Research and External Relations; and Information and Documentation. In addition, the parliamentary parties have their own staffs publicly financed and German MPs have their own office with personnel, usually a head of office, a personal assistant, a researcher or other expert, and possibly some interns.[89]

Just like in the Tweede Kamer, each committee has a small staff of employees at its disposal, who assist the work of the committee with their administrative, organisational and technical expertise, acting directly in accordance with the instructions and requirements of the committee Chairperson. This committee staff has no explicit task in informing parliamentarians (that lies with the personal staff and other staff of the parliamentary groups). They have mostly procedural tasks to take care that the parliamentary process goes according to the Rules of Procedure. Their other tasks include providing policy advice to the committee Chairpersons and maintaining contacts with the ministries, parliamentary groups, parties, and concerned associations.

The Research Services (Wissenschaftlicher Dienst) is especially interesting to mention here. They are intended to help reduce the executive's knowledge advantage over the legislative branch. They mostly deal with *individual* enquiries from Members, who are able to request studies or reports on any topic of relevance to federal politics which are required by the Members in the exercise of their parliamentary mandates. There are at present 10 research sections, with a total of approximately 65 research staff, who support Members' work by presenting their findings concisely and comprehensibly in forms that are suitable for the purposes of political discussion. The thematic areas covered by the ten research sections mirror the portfolios of the parliamentary committees and ministries and thus cover all policy fields. Each year, the research staff draw up between 2,000-3,000 studies, overviews, dossiers, etc. The Research Services also work on their own initiative; they offer what is known as a proactive briefing. This means they analyse topics that are in the news or have recently come to prominence in political debates in

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89 Magone, J. M. (2019). Contemporary European politics: A comparative introduction. Routledge.

short briefings and background papers.[90] The Research Services are especially important on lawmaking advice, and also on EU lawmaking.

The Research Services receive up to 4,300 inquiries a year, mostly from individual MPs but also from different bodies in the Bundestag like committees. The Research Services knows different forms such as elaborations, status quo, documentation and technical contributions, which differ in form and scope. In exceptional cases, work is also awarded to external scientists. As a rule, the Research Services do not conduct their own research, but present the state of research, legislation and jurisprudence in an understandable and clear manner. The work is generally available to the MP exclusively for four weeks. After this time, the Bundestag publishes the work on its website. On their website there is a search option, so it is difficult to establish to what extent the requests are on digitalisation issues.

Working method of the permanent committees in the Bundestag
In order to obtain information on a subject under debate, the committees have different methods. They ask written or oral questions, sent an inquiry request to the Research Services or the Committee on Education, Research and Technology Assessment, start a subcommittee or a study committee on a specific topic, have a working visit or hold public hearings attended by experts in the given field from outside parliament. The committees make extensive use of their power to conduct such hearings. They are a means for the committees not only to gather relevant information but also to inform the public about a wide range of views on issues of general interest. They also give interest groups an opportunity to state their often widely diverging positions publicly in the Bundestag. The right to request a public hearing is a minority right. A public hearing must be held upon the motion of one quarter of the committee's members. It is also customary for interest groups to communicate in writing their views on proposed legislation to the committees for inclusion in their deliberations.

According to the Rules of Procedure, committee meetings are not in principle open to the public. Hearings are also not always publicly accessible. The reasoning behind this is that MPs during meetings – like on draft legislation – do not give speeches intended to be heard by the public, but discuss individual points with each other, submitting and withdrawing proposals for debate. That way there is more attention for creating sensible and workable legislation. And during closed hearings, MPs will feel more free to ask or say what they want to say.

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90 A selection of the documents produced by the Research Services is made available on the
    Bundestag's website and is therefore accessible to the public as well. See
    https://www.bundestag.de/analysen.

2.2   Committee on Education, Research and Technology Assessment

ORIGIN & POSITIONING

The Committee on Education, Research and Technology Assessment was established in 1989 and focuses on long term strategic choices for research and education policy. It mirrors and controls the German Minister of Research and Technology and it is the only standing committee in the Bundestag that also directs its own research unit: the Office of Technology Assessment at the German Bundestag: *Büro für Technikfolgen-Abschätzung beim Deutschen Bundestag* (TAB). TAB is a parliamentary unit that supports the Committee in its work and provides advice and scientific reports on the policy of Research and Technology.

The establishment of the Committee on Education, Research and Technology Assessment goes hand in hand with the establishment of TAB. Since the 70s, the idea of providing continuous technology assessment in support of the Parliament and its committees was prompted by the creation of the Office of Technology Assessment (OTA) of the U.S. Congress. Several societal and environmental consequences raised awareness of the need for early assessment and awareness of new and emerging technologies. A parliamentary discussion in the Bundestag on how to give shape to the institutionalisation of technology assessment (TA) started in 1973. Several proposals passed the revenue. Despite the difference in opinion on how to give shape to this institutionalisation, all parties agreed on the need to have a permanent TA institution independent of elections and parliamentary cycles. They agreed that this institution should be supportive of the Bundestag and help them shape the conditions of scientific and technological change.

The 11th German Bundestag (1987-1990) set up a study commission on technology assessment.[91] One of the tasks of this study commission was to submit a new proposal for the establishment of TA in the German Bundestag. Out of three proposals, the proposal of the CDU/CSU and FDP (Free Democratic Party) was chosen. Their proposal was to rename the Committee on Research and Technology to the Committee on Research, Technology and Technology Assessment (later renamed into the now known Committee on Education, Technology and Technology assessment) and to authorise a scientific institution to conduct technology assessment for the German Bundestag.[92] After the conclusion

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91 Right after the Rathenau Instituut in The Netherlands was founded in 1986 as a TA institute in the Netherlands with the explicit mission to support the Dutch parliament. At that time the Rathenau Instituut was called the Nederlandse Organisatie voor Technologisch Aspectenonderzoek (NOTA).
92 https://www.tab-beim-bundestag.de/en/about-tab/history.html

of the pilot phase, the German Bundestag decided on 4 March 1993 to establish a permanent advisory institution for TA at the German Bundestag, as a result of the positive findings of the responsible Committee for Research, Technology and Technology Assessment.

The Committee has the responsibility for initiating technology impact analyses and seeks ways to translate their findings into practical policy and have them landed at the right moment in the parliamentary process. They have the mandate to decide on the working program of TAB, based on requests of different committees and parliamentary groups (fractions) to conduct TA research on selected topics.

The Committee on Education, Research and Technology Assessment has several functions:

- An **informative** function for the whole of parliament using their studies done by TAB. All MPs, parliamentary – including study – committees, staff of the parliamentary political parties and of Members of Parliament as well as the Scientific Service of German Bundestag comprise the main audience for and potential users these reports. The studies are also there to support public debate.
- A **scrutinising** function: the Committee is overseeing the Federal Ministry of Education and Research on topics of long-term strategic choices in research and education policy, for example when it comes to legislation in this area. The Committee may also recommend that "their" ministers take specific measures. The committee has no special task in scrutinising digitalisation issues, except for when it comes to digitalisation issues in the field of education – like the use of digital means in the classroom – or research policy.
- The Committee has an **addressing** function. Like all committees in the Bundestag it has extensive rights to take up an issue on their own initiative. It also gives recommendations to the plenary of the Bundestag on legislation or other political items. TAB also supports the Committee with a horizon scanning function in identifying technological fields with relatively medium and long term relevance which are expected to require parliamentary action. Among other things, this enhances the Committee's opportunities to put issues on the political agenda at an early stage. In practice, it turns out that the publication of TAB reports is a slow process and, therefore, it happens that the reports are not in time for the relevant political debates.
- The Committee has a **coordinating** function due to their evaluating role in research requests on science and technology studies from other committees and parliamentary groups and members. In practice, there is not much knowledge exchange between the Committee and other Committees; this takes mostly place on the level of the parliamentary groups.

- Most of the draft legislation is coming from the Federal Government, but also sometimes from within the Bundestag or from the Bundesrat. The Committee does – like all committees – perform a significant part of the technical work in the **legislative** process (see Introduction).

The committee on Education, Research and Technology Assessment currently has 42 members, just like other important committees such as the ones on Finance, on Economic Affairs and Energy and the Budget Committee. The Committee is supported by TAB; this means this Committee has an extensive amount of external support to fulfill its mandate.

TAB is operated by a scientific institute outside parliament. In 1990, the Committee tasked the Karlsruhe Research Centre, now the Karlsruhe Institute of Technology, with running the TAB. It is currently supported, on the basis of cooperation agreements, by the Helmholtz Centre for Environmental Research in Leipzig, the Institute for Futures Studies and Technology Assessment, and VDI/VDE Innovation und Technik GmbH.[93] TAB works exclusively for the Bundestag; the legal basis for TAB is a supplement to section 56 of the Bundestag's Rules of Procedure. Eleven scientists are currently working for TAB. There are also eleven researchers involved from both consortium partners who are responsible for the horizon scanning report and the Topic Briefs Profiles on specific technologies of interest to the Committee which arise from the horizon scanning study.[94]

The Committee is responsible for commissioning analyses, setting priorities and approving final reports of TAB. It has a standing TA rapporteur group, with one member from each parliamentary political party. This group of eight rapporteurs[95] supervises the whole process of the studies and projects of TAB. The position of rapporteur does not entail much public or political exposure; most rapporteurs have a personal interest in TA and/or have a scientific background. The rapporteursgroup prepares all the decisions on TAB to be taken by the Committee:

- The selection of the topics of on which to initiate a TA project (more on this procedure below);
- The review and approval of the final report; the rapporteurs can only comment on the scientific quality of the report, political comments are not allowed. The approval process is a consensus process that generally takes a long time. The main reason for this is that the rapporteurs – who are doing this besides their other parliamentary work – do not have sufficient time to

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93 https://www.tab-beim-bundestag.de/en/about-tab/index.html
94 http://www.tab-beim-bundestag.de/de/publikationen/themenprofile/index.html.
95 https://www.tab-beim-bundestag.de/en/about-tab/client.html#berichterstattergruppe.

review the lengthy TAB reports. As a consequence, the TAB reports are sometimes outdated when they are published.

- The dissemination of the report in the Bundestag. After approval of the rapporteursgroup, the report is turned into an official Bundestag document and sent to all MPs, the plenum and to the Committee(s) to which the report is especially relevant or the Committee from which the request came from. The rapporteurs and TAB itself help to integrate the results into the work of other committees, for example by giving a briefing on the report.[96]

The Committee secretariat assists the rapporteurs in their work.

Goals

TAB itself defines the goals of their work, i.e. policy advisory technology assessment as follows[97]:

- analyze the potential of new scientific and technical developments and explore the associated opportunities;
- to examine the social, economic and legal framework for the implementation and application of scientific and technical developments;
- analyze their potential effects with foresight and comprehensiveness in order to show the chances of using technology as well as ways to avoid or mitigate their risks;
- and on this basis develop options for action and design for political decision-makers.

Topics

Proposals for TAB projects can come from many different sources:

- One of the many of the other 45 committees in the German Bundestag. Every two years, the Chair of the Committee sends a letter to all MPs and Committees asking for requests for TAB studies. Over time, the range of committees initiating TA studies has grown considerably. This growing interest is an important indication of TAB's visibility and acceptance. Besides the Committee on Education, Research and Technology Assessment, the Committees on Food and Agriculture, on Economic Affairs and Energy and on the Environment, Nature Conservation, Building and Nuclear Safety often initiate topics for TA studies. In total, topics for TAB studies have been proposed by more than ten committees.
- The parliamentary groups (fractions) in the Committee for Education, Research and Technology Assessment.

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96 https://www.tab-beim-bundestag.de/en/about-tab/client.html.
97 https://www.tab-beim-bundestag.de/de/ueber-uns/aufgaben-und-ziele.html.

- The horizon scanning exercise of TAB can result in new ideas for TAB reports (see the Topic Briefs Profiles).

The requests differ in their comprehensiveness and elaboration. In 2019 there were overall fifty requests. TAB makes a first selection based on criteria like: has this been a topic before? Is it really a TA issue? Etc. Usually, about twenty requests are left on which the TAB staff then submits a statement for every proposal on its scientific workability as well as considerations of the objectives, substance, and methods. Under the guidance of the committee Chair, the TA-rapporteurs along with the director of TAB discuss the political and factual relevance of requested topics. They also try to cater to all the fractions and as many different committees as possible. Topics are then selected and unanimously presented to the committee for debate and decision. A proposal is accepted when a third of the committee members do not oppose it.

Methodology
TAB's research methods include future reports based on horizon scanning of scientific-technical trends and socio-economic developments in early developmental stages, policy benchmarking through international comparative studies of policy approaches, innovation reports to review current innovations developing rapidly, participatory discourse analysis to study attitudes and debates of representative actors regarding future demand and action requirements, dialogue with stakeholders through e.g. an internet panel and consultations with experts.

They monitor and analyze scientific, public and political debate to enrich their research. They use interactive methods such as workshops and expert meetings to bring together scientific experts and MPs to discuss interim results of their research. Representatives of societal groups are frequently included.[98]

External experts
TAB makes extensive use of external experts. For central issues defined for a study, TAB makes recommendations to the Committee on expertise to be commissioned from external experts or scientific institutions. Cooperation with such external experts and their reports is a central element of project work. Over the entire term of the project, the team monitors and analyses the ongoing scientific debates and related public and political discussions. Particularly when interim findings are at hand, workshops and expert meetings are organised to bring together scientific experts and Members of Parliament. Representatives of societal groups are frequently included. The results of all activities are summarised by TAB, and the project is concluded with a final report and a policy brief since 2014.

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98 https://www.tab-beim-bundestag.de/en/about-tab/working_method.html

The budget of TAB is 2.6 million euros per year: 1.3 million for the funding of the office (staff, infrastructure and overhead), 600.000 for the partners IZT and VDI/VDE, and 700.000 for external expert opinions.

RESULTS

Every year about six reports are published. All reports are public and can be found on the website of TAB.[99] The TAB reports are quite extensive and bulky. They come with a summarizing policy brief of about four pages. MPs in the Bundestag keep asking for these kinds of bulky reports which are thoroughly and balanced. The reports also entail policy options (not recommendations), if relevant, for example when existing legislation needs modification or new legislation is needed. For the coming two years, 80% of the topics of TAB concerns digitalisation issues.[100]

title
Energy saving effects in the building sector »
Opportunities and risks of digitizing critical municipal infrastructures using the examples of water and waste management »
World without cash - changes in classic banking and payment systems »
Petitions to the German Bundestag - awareness and use »
Status and prospects of telemedicine »
Digital Management Opportunities »
Possible discrimination through algorithmic decision systems and machine learning »
Innovative technologies, processes and products in the construction industry »
Energy consumption of the IT infrastructure »
Possible health effects of different frequency ranges of electromagnetic fields (HF-EMF) »
Algorithms in digital media and their influence on opinion formation »
Potential of mobile internet and digital technologies for the better participation of people with disabilities »
Digitization of agriculture »
Challenges for plant breeding » Effects of structural change in plant breeding on genetic diversity, variety and the performance of domestic agriculture
Data mining - sociopolitical and legal challenges »

Many of the recent TAB reports in 2017-2019 also focus on digitalisation, for example on health apps, virtual and augmented reality, social bots, robotics and assistive neurotechnology in nursing, job profiles and qualification requirements under the influence of digitalisation, mobile and digital communication in the world of work, 3D-printing and online citizen participation in the parliamentary world. TAB also finished two surveys of social stakeholders on two subjects related to digitalisation: health apps (how are they used?) and how do young people rate personalized online media? These surveys are called TAB Sensors.[101]

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99 http://www.tab-beim-bundestag.de/de/index.html.
100 http://www.tab-beim-bundestag.de/de/untersuchungen/laufende-untersuchungen.html.
101 http://www.tab-beim-bundestag.de/de/publikationen/sensor/index.html.

Most of the products are the so-called topics briefs: a compact overview of selected scientific and technical trends and their relevance for politics and society. In the period of 2017-2019 TAB published 24 of them. Most of them on digitalisation issues (16): big data, communication and organization of employees interests in the digital age, digital companions (robots), deceptive internet designs, biometric identification, robo-advice in the financial sector, e-sport (computer games), e-voting, deepfakes, quantum computing, cryptocurrencies, big social data and algorithms, microtargeting, speech recognition, digital companies as new nations and algorithm legal advice.

Closer look at two reports

Form	Subject	Date
Report	Virtual and Augmented Reality	April 2019
Report	Robotics and assistive neurotechnologies in nursing - societal challenges	April 2018

In their report on VR and AR, the authors describe the potential of these technologies. In doing so, they describe the potential of the technology itself (e.g. the potential for industry due to their wide range of application areas) and for Germany (e.g. the German science on AR and VR is internationally well-positioned).[102] Also in their mentioning of the risks they make a distinction of risks related to the position of German's science and industry, and risks related to the technology and potential social risks such as the immersive character of the technology. They do not explicate which public values may be at stake by these risks. Their VR/AR report concludes with some policy options. These recommendations focus on areas for action, for example the need for a social discourse to inform and shape regulation and policy, how to safeguard the German position within science and industry, and media literacy to inform citizens.[103]

In their 2018 report on robotics and neurotechnologies, social aspects are central. Public values as such are not explicitly mentioned. This report mentions the opportunities and risks of the technology, but with a special focus on – as the title suggests – the social aspects.

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102 https://www.tab-beim-bundestag.de/de/pdf/publikationen/zusammenfassungen/TAB-Arbeitsbericht-ab180_Z.pdf
103 https://www.tab-beim-bundestag.de/de/pdf/publikationen/zusammenfassungen/TAB-Arbeitsbericht-ab180_Z.pdf

IMPACT

According to TAB's own website, their work is frequently used and implemented by parliament. They describe that parliamentary committees discuss the reports presented by TAB and MPs debate the reports in plenary sessions.[104]

In another report on the different parliamentary TA institutes in the world[105], TAB mentions a few criteria that indicate to some extent the impact of TAB's work:

- The satisfaction of the MPs in the Bundestag. This may be expressed openly in parliamentary debates or in more informal ways including face to face conversations. According to the authors working at TAB is that TAB has fared quite well in this respect and there are numerous examples of MP's highlighting their praise of TAB's work.
- Another criterion is the frequency of the occasions where Parliament in plenary debates and in Committee meetings deals with TAB-reports. The number of Committees that put TAB- reports on their agenda has indeed increased constantly in recent years. To a somewhat lesser extent, the same holds true also for plenary debates.
- Another indicator of how well received TAB's advice is, is the demand for new TAB-studies, which continuously exceeds the capacity by a wide margin. The number of requests for studies remains quite stable, between 50-70 of which usually only 12 can be taken up because of capacity limitations.
- And last but not least also the resonance in the media and the general public as well as the demand for electronic and printed versions of TAB products is an indication that TAB's work is very well known and well received by many societal groups, may it be trade associations, NGOs, scientific and educational institutions, federal and regional ministries or others.

It is however difficult to precisely measure the impact of TAB reports – according to one of the interviewees – since "the Bundestag is not a scientific institute" and, therefore, it is not common for MPs to refer to reports – be it of TAB or another institute – in their statements.

From the interviews there are some indications of what helps a report to have political impact:

- The topic; is there any public upheaval or concern with the subject? Does it concern people's daily life? For example, artificial intelligence is a topic on

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104 https://www.tab-beim-bundestag.de/en/about-tab/client.html
105 https://eptanetwork.org/images/documents/EPTABooklet2013.pdf.

which German citizens have a lot of worries on the loss of jobs and the extent to which humans will be controlled by this technology in the future.

- Timing; have the political trenches already been taken? Then an impartial report such as the one on nuclear energy will not have any impact on the political debate. Is the report in time for a current hot political debate? For example, recently the Committee accelerated the publication of a TAB report on prenatal diagnostics because there was a big political debate on a law on abortion.

- On request; since the reports are requested upon by a political fraction or a Committee, there is always an interest in the report from at least one actor in the Bundestag. That way, there is always some kind of 'ownership' of the report.

- Impartiality of the reports; the reports are reviewed by the rapporteursgroup and based on a consensus of this group, the report is published and sent out to all MPs in the Bundestag. This means the work of TAB is very much considered non-partisan. This helps to put a firm knowledge base in the political discussions related to the technology in the Bundestag. The downside of this rapporteursystem is that it really slows down the publication process and ,therefore, reports are sometimes outdated when they come out. One of the interviewees mentioned this was the case with a TAB report on 3D technology.

2.3   Committee on the Digital Agenda

ORIGIN & POSITIONING

The committee on the Digital Agenda is the first German permanent parliamentary body for digital policy, established in 2014. During earlier electoral terms, in the work of various standing committees in the Bundestag the development of digital media was already a recurring issue. This led to the formation of the Study Committee on the Internet and Digital Society for the electoral term of 2009-2013. In the final report of this Committee, they emphasize the importance to have a permanent committee on digital policy within parliament as these subject will become even more important in coming years and digitization is a topic that crosses all ministerial departments. In one of their final reports, the Study Committee stated: "The deliberations of the Study Committee in recent years have shown that digitization is a cross-sectional theme that concerns different areas of life. It has also become clear that digitization is a major development in all areas of life, which is by no means complete. The committee ,therefore, recommends that the German Bundestag appoints a permanent parliamentary committee on this

theme as quickly as possible."[106] Next to a permanent parliamentary committee, the Committee also recommended a state secretary on digital policy (see below: Dorothee Bär was appointed in March 2018).[107]

In summary, the line of reasoning of the Study Committee was: if parliament wants to meet the challenge of the complex and novel policy questions regarding digitalisation, it has to increase its problem solving capacity with a respective permanent parliamentary committee. Consequently, such a permanent committee was to be set up on December 19, 2013. However, there were disagreements about the tasks of the committee and whether it should have leading responsibilities. But since there is no ministry that the Committee mirrors, as the other standing committees all have, the Committee on the Digital Agenda only has an advisory role in the legislative process towards other committees.[108] In the Bundestag debate on February 13, 2014, the opposition criticized the fact that the committee had no leading responsibilities – like other standing committees – only advisory. In the end, it was on 19 February 2014, that the constituent meeting took place.[109]

The Committee on the Digital Agenda is first of its kind in the European Union. A rather remarkable institutional change since it increased the number of permanent committees in the Bundestag from 22 to 23. Latter does not happen in the Bundestag too often since such institutional change implies high transaction costs in the strong committee system the Bundestag has.

The Committee has no legislative function, only in advising other committees on legislation on digitalisation issues. The committee formally can have this function, it just never received the lead in drafting a law until now. But theoretically this is possible. Still in the brochure on the Committee itself, as published by the Bundestag, the Committee mentions that: "The Committee primarily works with four federal ministries: the Federal Ministry of the Interior, Building and Community, which deals with security issues; the Federal Ministry for Economic Affairs and Energy, which focuses on support for the IT industry; the Federal Ministry of Justice and Consumer Protection, which is the lead ministry for data protection matters; and the Federal Ministry of Transport and Digital Infrastructure, which is responsible for broadband deployment. In addition, the post of a Federal Government Commissioner for Digital Affairs with the rank of a Minister of State was created in

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106 http://dipbt.bundestag.de/dip21/btd/17/122/1712290.pdf (p.100).
107 http://dipbt.bundestag.de/dip21/btd/17/125/1712550.pdf
108 Other committees have this advisory role as well.
109 https://de.wikipedia.org/wiki/Ausschuss_Digitale_Agenda#cite_note-einsetzung-3.

the Federal Chancellery at the start of the current electoral term, and Dorothee Bär[110], Member of the Bundestag, was appointed to this role."

Box 1 | Reasons for the existence of a Committee on the Digital Agenda, according to the Committee itself

"The digital revolution is changing the world. It offers major opportunities in all areas of life and has the power to improve people's lives. At the same time, however, the challenges facing policymakers and society are equally vast. There will be a ten-fold increase in the amount of data available in 2025 compared to 2016. We need new knowledge and skills to enable us to select, analyse and evaluate the information available online. This raises questions relating to data security, consumer protection and media literacy, but also copyright. The internet is also **transforming the relationship between the state and the public**, and offers **greater opportunities for participation**. The prerequisite for this, however, is for **everyone to have an equal chance to partake in the opportunities of the digital transformation**. Policy-makers and society must find answers to the challenges posed by digital technologies. They must **communicate the advantages, raise awareness of the risks, and establish the parameters for the digital transformation**."

Source: Brochure on Committee on the Digital Agenda, January 2019, German Bundestag.[111]

SET-UP & APPROACH

The committee consists of 22 members.[112] Most of them are young, digital savvy, some of them are the spokespeople of their parties on digitalization. However, the Bundestag has 6 parties present, hence the majority of members are not spokespersons for digital affairs. The number of members in the committee is less than other standing committees have; they have mostly more than 30 members. This is an indication of the (lower) status of the committee in the Bundestag. Most members are more interested in becoming a member of a committee which has leading responsibilities on many political items. For example, the most powerful committee has 41 members: the Budget Committee that deals with all matters relating to planning and control of the federal budget, and in practice decides on the apportionment of budget funds. In the interviews it was mentioned that the members of the Committee on the Digital Agenda often feel more related to each other than to the members of their own fraction.

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110 Bär was appointed Staatsministerin für Digitalisierung (a kind of state secretary under the umbrella of Merkels Kanleramt).
111 https://www.btg-bestellservice.de/pdf/80193800.pdf.
112 As per January 27th 2020.

Within the committee there are small working groups with members of the same fraction for internal political opinion forming and decision making, for example considering motions or questions to the government.

Goals

The goal of the Committee on the Digitale Agenda as formulated in the official document (*Antrag* [113]) is: to do justice to the significant topics of digitalisation and the interconnectedness of these topics across all policy fields.[114] The committee is supposed to anchor the work on the effects of digitization on society and policy permanently in the Bundestag. In the *Antrag* three tasks of the committee are mentioned:

- To provide advice on Internet issues and the digital agenda and hand over the results of its consultations to the committees responsible.
- To engage – based on the right to self-referral – in all digital issues on its own initiative without a referral from the plenary to obtain information about e.g. legislation from the ministries. The committee mentions the following issues as issues that they want to drive forward in political terms: support for the digital industry, data protection, copyright, net neutrality and big data.
- To proceed with the recommendations of the Study Committee Internet and digital Society.

In their brochure, the committee also explicitly refers to the following tasks:

- Advising on European and international issues that are regularly referred to the committee. These include, for example, the EU cyber defence policy framework or the European Commission's green paper on mobile health.
- Considering and debating the pros and cons of different parliamentary initiatives in the working groups – like motions, etc. – set up by their parliamentary groups.
- Perform as a key point of contact in Germany when it comes to the international discussion on digital policy issues. The committee sets its own priorities in this context, gains a complete picture of the digital revolution based on international dialogue with experts from the political field, business and the media.

From the start, the main objective of the committee is to supervise the Government's Digital Agenda and to act as an advisory committee contributing

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113 http://dip21.bundestag.de/dip21/btd/18/004/1800482.pdf
114 https://www.btg-bestellservice.de/pdf/80193800.pdf

expert's knowledge on digital policy issues to the other permanent committees. The committee presents itself on its website as a catalyst of parliamentary work on digital issues.[115]

In practice, as we learned from the interviews, it is quite hard for the committee to fulfill her catalyst role on digitalisation in the Bundestag. So far the committee "only" twice had the leading responsibility on two small political items (one of them being the Internet Governance Panel). And quite surprisingly, even though overseeing the digital strategy of federal government was its main task from the beginning, the committee had no leading responsibility when it came to scrutinizing and debating the digital strategy of the federal government in the Bundestag. The plenary had appointed the Standing Committee on Economic Affairs to have the leading responsibility in this. The committee on the Digital Agenda had the same task as other standing committees, namely to advise the leading responsible committee (i.e. making amendments on the recommendations the leading committee is preparing).

Another example of the fact that the Committee on the Digital Agenda does not have the status as one would expect or desire the committee to have, is that in the case of a recent large data breach in Germany, the committee was able to talk to the responsible minister only after the other standing committees of Justice, the Committee of Security and the Committee of Internal Affairs had spoken to him.

The Committee on the Digital Agenda seems to 'suffer' from not having a ministry as a counterpart. That would automatically give them the leading responsibility in any legislation or scrutinizing any other political items coming from that ministry. Therefore, the committee is having a harder time than other standing committees in proving its own added value to the parliamentary discussion on digitalisation. The committee continuously has to monitor the plenary agenda to check whether there are any urgent digitalisation issues on it and claim its responsibility (although it is mostly advising and rarely leading).

The functions of the committee are in practice as follows:

- The committee is **informing** itself through all different kinds of ways like (public and closed) hearings with experts from the business community, academia and civil society, meetings where they discuss special topics or where they call ministers or other government officials to the Bundestag for questioning, working visits in Germany and abroad and online citizen participation (see paragraph Set-up and approach). The committee

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115 https://www.btg-bestellservice.de/pdf/80193800.pdf

members – some of them (6 out of 22) being spokespersons for digitalisation – are most of the time improving their own knowledge and skills on digitalisation issues. They use this expertise to inform their fellow party members on issues of digitalisation, for example they (or their personal staff) write briefs on digitalisation topics that are currently relevant for them or the committee member is replacing its colleague from another standing committee at a political debate when digitalisation is on the agenda.

- The committee does not mirror one specific government department like the other permanent committees in the Bundestag do. From the start, the committee was supposed to **oversee** the government's Digital Agenda but also bills, reports, etc. from a wide range of ministries including the relevant documents at the European or international level.[116] In practice, they have the right to call ministers to the Bundestag, but – since they rarely have leading responsibility – they do not often give recommendations to the plenary on legislation or other political items (only advising other committees).

- The Committee on the Digital Agenda – in spite of the name of the Committee – does not seem to have an important **agenda setting** role on issues of digitalisation in the Bundestag. Hearings are not that often organized. If they are organized, they are mostly on topics the committee does not know much about or about pressing incidents like cyberattacks or scandals like the one with Cambridge Analytica. The committee discusses these topics because it considers them very important and sees the need for more parliamentary expertise, such as on blockchain computing or virtual currencies like the Libra.

- The committee has virtually **no legislative function** as the other permanent committees at the Bundestag have. The committee has had no leading responsibility in the legislative process on questions concerning digitalisation; only through amending recommendations on legislation by other leading committees.

- The committee is supposed to have a prominent **coordinating** function through advising other Bundestag committees on digital issues, for example on motions, policy documents, draft legislation and reports which have to do with digitalisation. In practice, from the interviews, we heard that there are not a lot of coordinating activities between the Committee and the other standing or temporary committees. The staff does not play a significant role in this as well. Most of the coordinating is done within the fractions. The committee does have an intermediating function in the sense that the

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116 The Federal Ministry for Economic Affairs and Energy, the Federal Ministry of the Interior and the Federal Ministry of Transport and Digital Infrastructure have the lead responsibility for the implementation of the Agenda.

committee works across committees organizing public hearings and consultations, for example lately one on Libra.

The Committee on the Digital Agenda has different working modes:
- Meetings with the other committee members, e.g. on proposals of the opposition fractions[117];
- Plenary debates on several digital issues and policies with cabinet members;
- Public hearings on IT security, Libra, disinformation, blockchain and quantum computing[118] and closed sessions with experts;
- Public and closed technical briefings;
- Working visits and interviews with EU commissioners[119];
- Online participation tool to connect with (registered) citizens for input on the committee's everyday work and to foster a public debate about certain policy issues (in 2015) [120];
- Asking for oral governmental requests about all issues on the digital agenda;
- Supporting responsible committees in deliberating and voting on public bills and their amendments on digital issues;
- Building networks with other national MPs or group of MPs and others who see themselves as digital experts in parliament, for example during the last Internet Governance Forum in Berlin, the committee organized a meeting – supported by German federal government –not only for digital spokespeople in parliament but for all MPs with focus on digital policy.
- Meetings with other national or international parliamentary committees on digital issues like in Denmark (with the governmental body Digital Agency), in Oman (on 5G), in Sweden (on broadband), in the Emirates (smart cities, harbors and logistics).
- The committee does not do research herself or commissions any research as such. There is no research budget.

RESULTS

On the webpage of the Bundestag under the Committee on the Digital Agenda, the committee reports on their activities as mentioned above. For example, on the (public) hearings the committee has held, they report the input from the experts

117https://www.bundestag.de/ada#url=L2Rva3VtZW50ZS90ZXh0YXJjaGl2LzIwMTgva3cyNi1kZS1ka WdpdGFsaXNpZXJ1bmctNTYwMzU2&mod=mod545462.

118 https://www.bundestag.de/ausschuesse/a23_digital/anhoerungen.

119https://www.bundestag.de/ada#url=L2F1c3NjaHVlc3NlL2EyM19kaWdpdGFsL2FydGlrZWwvaW5kZ XgvMjAxOC0wNC0yNi1iZXN1Y2gtYW5kcnVzLWFuc2lwLTU1NzIxOA==&mod=mod545462

120 The pilot project and its results is documented until mid of 2015 and can still be found at the webpage of the German Bundestag, see https://www.bundestag.de/ada/beteiligung/forum.php.

they invited to the meeting. Under each report they list the invited experts. And they give a brief summary of the contributions. The same goes for relevant parliamentary debates where on the webpage of the committee the summaries of the contributions of the different members of the committee can be found.

Form	Subject	Date
Article on public hearing	IT security of hardware and software: 'Technological sovereignty is a prerequisite for more cyber security'	Dec 2019
Article on public hearing	Resilience of democracy: 'Shaping of opinions and manipulation of opinions are often closely related'	April 2019
Article on technical discussion	Vosshof: Numerous entries and complaints about data protection violation	Dec 2018
Article on public hearing	Experts warn, despite the great chances, of the blockchain hype	Nov 2018
Article on public hearing	A look into the future with powerful quantum computing	June 2018

On the webpage of the committee there is an overview of the activities the committee had in the electoral term of 2013-2017[121]:

- 6 debates with members of cabinet on digital policy;
- 16 sessions with national and international guests;
- 22 public hearings;
- 4 working visits abroad with a delegation of the committee.

When we take a closer look, we notice that in 2014 the Committee held 6 public hearings and 28 closed sessions. In 2015 this increased: 12 public hearings and 56 closed sessions.[122]

Closer looks at two public hearings
The hearing and hearing article on the resilience of democracy, initiated with the forthcoming European elections in May 2019 in mind, emphasizes the urge to educate society to not be fooled by disinformation, for example by promoting media

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121 https://www.bundestag.de/resource/blob/527400/5bece925fdfa512f19b8ea85f58b2828/ADA-Bilanz-18WP-data.pdf.
122https://www.psa.ac.uk/sites/default/files/conference/papers/2016/Paper_Schwanholz_Jakobi_0.pdf

literacy. Another key point mentioned is the need for transparency, to strengthen digital civil society. For example disclosure of details on all digitally displayed ads, such as target group.[123]

In their latest public hearing article on IT security of hardware and software, no specific public values are mentioned - implicitly or explicitly. This article mainly describes areas for attention and potential steps to take according to each invited expert.[124]

Impact

After one year in office, in 2014, the Committee on Digital Agenda was criticized by journalists and also the German digital community. The main comment was that there was a wide difference between ambition and reality after taking a closer look at the activity and results of the committee. One interviewee mentioned the term 'paper tiger' while referring to the committee. It seems, indeed, that the current status of the committee does not live up to the expectations and goals set at the start of the committee. One interviewee mentioned that expertise on digitalisation in the Bundestag is not valued as a special expertise that has to be consulted before any political debate related to the digital transition of society. However, it is hard to really estimate the impact the work the Committee is doing since most of its impact runs mostly along party lines.

The role of the Chair is an important one in the Bundestag parliamentary culture. The former Chair – Jimmy Schulz – and the current Chair – Manuel Höferlin – are from the same party (FDP) and members of the opposition. Höferlin wants to speed up an increase in the impact of the committee on the Bundestag. But as Schulz stated before: "Network policy is not bundled, but dismembered further. This makes it difficult for us to work efficiently in the Digital Agenda Committee and does not do justice to the importance of digitization in our society."[125]

Another critique the committee received from the public was about the small number of public sessions the committee has organised. Instead of making the committee's work more transparent for the public, the committee chooses to sit mostly behind closed doors (as is quite usual for permanent committees in the Bundestag by the way).[126]

123https://www.bundestag.de/ada#url=L2Rva3VtZW50ZS90ZXh0YXJjaGl2LzIwMTkva3cxNS1wYS1kaWdpdGFsZS1hZ2VuZGEtNjMzNjEw&mod=mod545462

124https://www.bundestag.de/ada#url=L2Rva3VtZW50ZS90ZXh0YXJjaGl2LzIwMTkva3c1MC1wYS1kaWdpdGFsZS1hZ2VuZGEtNjY5Mjg4&mod=mod545462 and https://www.bundestag.de/ausschuesse/ausschuesse18/a23.

125 https://digitalministerium.org/.

126 Idem footnote 31.

2.4   Study commission on 'Artificial Intelligence'

ORIGIN & POSITIONING

In the Bundestag study commissions set up a study to prepare political decisions on wide-ranging current issues. These commissions are charged with submitting reports and recommendations to the Bundestag before the end of a particular electoral term. They are composed of half parliamentarians and half external experts, who enjoy the same rights as parliamentarians and are set up by the Bundestag upon a motion of minority: one quarter of its members. These study commissions submit a report to the Bundestag no later than the end of the electoral term. [127] The reports from the study commissions contain not only an analysis of the situation but their mandate and objective is also to formulate recommendations for action to be taken by the Bundestag. "In this way, study commissions provide very specific advice to Parliament for future political decisions that could lead to legislative amendments or to new laws." Study commissions are not involved in the general legislative procedures.[128]

The full name of this committee we will describe in this section is the '*Committee on Artificial Intelligence – Social Responsibility, Economic, Social and Ecological Potential*'. The Committee was established in June 2018 as a result of a motion of the parliamentary groups CDU/CSU, SPD, FDP und Die Linke in the Bundestag (77%). Also here – just like with the Dutch temporary Committee on the Digital Future – the MPs felt they did not have enough grip and they wanted to start their own forum for political opinion forming.

As the name already suggests, the commission explores a very wide range of issues with regard to artificial intelligence (AI). The aim of the commission is "to examine the future influence of AI on our life, German economy and the future world of work. Both the opportunities and the challenges of AI for society, the state and the economy are discussed. A variety of technical, legal and ethical questions are up for discussion."[129]

The focus of this Commission on AI is not just on the question of what approach should be taken to AI in these areas, but especially also whether – and if so, what – concrete policy-based actions and regulation is needed at national, European and global level in order to make the opportunities of AI economically and socially usable and to minimize its risks.[130]

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127 https://www.btg-bestellservice.de/pdf/80080000.pdf, page 51.
128 https://www.btg-bestellservice.de/pdf/81021700.pdf, page 4.
129 https://www.bundestag.de/ausschuesse/weitere_gremien/enquete_ki.
130 https://www.btg-bestellservice.de/pdf/81021700.pdf

From the interviews, it is clear that the motive to start this Study Committee is two-fold. On the one hand, there is the geopolitical race to be the first in AI innovation, and Germany wants to run in the frontline. On the other hand, in Germany there is quite some public unrest on the issue of Artificial Intelligence. German citizens worry especially about the possible loss of professional autonomy through the development of AI through machines that think for you, machines that steer human or human behavior. That way AI differs from digitalisation as one of our interviewees stated, citizens worry more about AI since they have a sense that the technology is uncontrollable.

SET-UP & APPROACH

The Study Commission on AI is a temporary committee and is composed of an equal amount of parliamentarians (19) and external experts (19). There is quite a lot of overlap between the members of the Committee on the Digital Agenda and this study committee (more than half fulfil both positions). Other members are part of standing committees for which AI will play an important role in the future, like for the Committee on Social Affairs and Labour. Most members do have some knowledge of digitalisation.

The experts are nominated by the parliamentary groups. The experts are often academics, or specialists with practical experience, who are able to feed in a wide range of different perspectives. This concentrated expertise makes study commissions akin to internal advisory bodies for Parliament, able to examine larger topics in detail and without too much time pressure.

The cooperation between MPs and experts on this scale and with this intensity is quite unique. In the interviews it became clear that since both have to work together, they have to understand and learn from each other. This is very different from a regular hearing in the Bundestag where each parliamentarian chooses its own expert(s) to hear and that same parliamentarian will be asking his questions only to their self-chosen expert. There is much more discussion within a study commission; it is a much more immersive experience for both MPs as experts. For example, the Chair of the Study Commission on AI, mentions that the learning curve on the topic of AI "was and is steep."

The results of study commissions in the Bundestag are also supposed to make important contributions to debates within society. However, the meetings of the Commission on AI are not always open to the public (as is the case with many committee meetings in the Bundestag). Recently was also decided that the interim reports of the different working groups within the commission will only be published as a summary, and not as full reports yet.

Functions of the commission
- The main function of the commission is **informing** the Bundestag on a wide array of economical, technical, legal, social, ethical, ecological and political issues on artificial intelligence. The commission collects and evaluates all kinds of information and drafts a report once their work is concluded. The commission also has the explicit task to make an important contribution to the public debate on AI in Germany. In the meantime, there is not much formal exchange of knowledge between the study committee and other standing committees. However, all members are of course also members of other standing committees. It is likely some of the gained knowledge in the study committee is used in the other committees by the same members.
- Study commissions are **not** taking part in the regular legislative or other procedures of the Bundestag which has to do with an **overseeing** function of any of the German government departments. They have their own agenda and can devote all their time to their informing and advising tasks. The Commission on AI, does of course, take account of what policy the federal government is developing in the domain of AI. For example, the commission recently had a technical briefing on the Data Ethics Commission.
- The goal of the establishment of a Study Commission on AI was in itself a way to **set the agenda** on AI for the whole of parliament. The committee has the task to specify AI's opportunities and potentials, as well as associated challenges in Germany and prioritize which issues the Bundestag has to focus on when it comes to AI. Therefore, the commission has to formulate specific advice, political guidelines and concrete actions to be taken by the Bundestag which could lead to legislative amendments or new laws. That way, the commission does not advise so much towards the German government but more towards parliament.
- The commission has **no coordinating** function towards other permanent committees in the Bundestag. It also has **no legislative function** since the commission does not take part in the regular parliamentary processes. The commission will not prepare or publish any draft legislation. However, it does have to come up with "strategies for a potential legal framework".

Working method

In general, this commission meets monthly and discusses a specific topic. They can invite additional guests to obtain extra information on these topics. They have the opportunity to commission more in-depth academic studies on the topic.[131] Their budget for external research is 75,000 euro per year. In practice, as we learned

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131 https://www.btg-bestellservice.de/pdf/81021700.pdf

from the interviews, it is actually not used for research but for public participation. Currently, a company is organizing an online consultation and a public meeting.

There is also a budget to hire someone from outside, a special advisor, who has a lot of expertise on the subject. In total, the staff consists of a head of staff, five staff members with a university background (including the special advisor) and three staff members working at the secretary.

The members have divided their work into the following areas, which are explored by six project groups.

1) AI and economic affairs (industry/production, finance, services, innovation)
2) AI and the state (administration, security, infrastructure)
3) AI and health (long-term care, sport)
4) AI and work, education, research
5) AI and transport (energy, logistics, environment)
6) AI and the media (social media, opinion formation, democracy)

Each project group is chaired by another political party. The biggest party may choose first. The CDU choose the project group on AI and economic affairs, the SPD choose the project group on work.

The biggest challenge of the working method of a study commission is that for most parliamentarians their membership is a side job. They have to do the work for the study commission next to their regular committee work. In practice, this means that many MPs have less time to participate; this causes a lot of planning problems.

RESULTS

As stated, the committee is initiated to form recommendations on policy and decision-making on AI. The decision establishing the commission asks the commission members to present their conclusions and recommendations for action soon after Parliament's summer recess in 2020, so that the first steps towards implementation can be taken before the end of the current electoral term.

So there is no final report published yet, but they do have some preliminary summaries (in German) on different areas.[132] The preliminary summaries that are **available** are on the areas of AI and economic affairs, AI and the state, and AI and health. These summaries are between 7-9 pages long. There has been a discussion in the commission on whether the total reports should be published

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132 https://www.bundestag.de/ausschuesse/weitere_gremien/enquete_ki

since they might be outdated soon, but in the end it was decided to only publish the summaries and wait for the final report to come with statements on AI.

Box 1 | Midterm results of three project groups

Project Group AI and Business
"The project group recommends increasing acceptance through an information campaign to impart knowledge and best practices and the strategic alignment with the principles of the German Sustainability Strategy and to take this into account in funding projects. In addition, medium-sized companies are to be supported with advice and training courses in qualification and application. Experiment rooms are to discuss new regulatory options. The transfer between basic and applied research should be subsidized. The state should promote the processes through its own administrative projects; a nationwide standard contract should support the rights and patent exploitation. Start-ups are to be supported in considering the General Data Protection Regulation (GDPR)."

Project Group AI and State
"The project group recommends systematizing the areas of application of artificial intelligence and corresponding competencies in public institutions through central monitoring and exchange of experience, as well as routine checks of possible uses and the anchoring of participatory approaches in the respective area. Appropriate content should be taken into account in administrative training and education. Further pilot projects are to follow, this applies above all to areas of participation. Transparency and traceability should be relevant target parameters. Regular audits are designed to ensure freedom from discrimination. A right to human processing by contradiction shall apply. Increased investment in security technologies is recommended; this should be divided into risk classes (for example, based on data sensitivity and the software's power). A mapping is to identify areas of attack AI systems to further recommendations on IT security derive. Further recommendations should appear in full text; existing dissent emerges from the summary.

Project Group AI and Health
"The project group recommends increasing the investment rate for information technology in the health sector to four percent in the long term and closing gaps in funding from the federal and state governments at short notice. The release of patient data for research purposes should be voluntary, individually gradable and revocable. These should be decentralized, anonymized, transferred to a new facility to be set up or an appropriate network and made available for research. An interoperability strategy is to be developed, which should become effective in a timely manner. A federal-state working group should harmonize the respective

data protection regulations as quickly as possible on the basis of the GDPR. The same is to be done for stakeholders in health and nursing education by developing a common roadmap, for which the Conference of Ministers of Education is cited as an example. Comprehensive training concepts with high accessibility should also be developed together. When expanding ecosystems, technology and data transfer, data quality should be taken into account. The Federal Ministry of Health is to create advisory options for the approval of digital medical devices at the Federal Institute for Drugs; the same is intended for digital offers and their providers to take place at a joint federal committee. Access to funding for small and medium-sized companies and start-ups is to be simplified. The Federal Government should work at European and national levels to further develop approval law and minimize liability risks by developing certification requirements with the German Institute for Standardization and other representations. The needs assessment in nursing robotics should be intensified through co-creative processes. Use cases should be checked for their effects on nursing staff and those treated, as well as possible financial exclusivity of the services."

The aim of the report of the commission is to come up with a report based on as broad a consensus as possible. In practice, it turns out it is quite a challenge to overcome political differences. Most reports exist of majority and minority statements. Sometimes the members take votes on different amendments to the final text.

The report is written by the experts together with the MPs (or mostly their personal staff members). It is not the staff of the Commission which is doing any of the writing.

IMPACT

The final report of the Commission on AI is not yet published. Therefore, it is not possible to make any statements about the impact of its work. However, based on the interviews we can mention some things about the expected impact and about the impact of other study commissions.

According to one of the interviewed MPs, the impact of the report is twofold: the MPs have a better understanding of AI and the report gives insights in how politics should deal with AI in the future, for example to what extent current legislation has to be adopted or how Germany should deal with changes in the labour market due to AI, etc.

According to the interviewees, it is always difficult to measure the impact of a commission. The process is never evaluated afterwards, for example to check whether the recommendations are taken on. They can however be far reaching, for example the initiation of the Standing Committee on the Digital Agenda is also a recommendation of another study commission. The most important impact, according to the interviewees, is that MPs are informed and that has a significant impact on opinion formation and decision making on the subject within the fractions. This is a long term indirect effect of a commission.

There is never an official reaction from the cabinet on a report of a study commission in the Bundestag. They can comment on it during the plenary debate on the final report. The interviewees do know that the federal government is following the proceedings closely.

3 United States

3.1 Introduction

Congressional committees fall into four broad categories: standing, select, special and joint. Of the four, standing committees are the workhorses of Congress. They are permanent bodies created by resolution or statute and authorized to examine and report out legislation to the full House or Senate. They also oversee legislation and federal agencies within their jurisdiction, and conduct hearings and investigations. Both the House and the Senate in Congress have different **standing** committees and subcommittees that have legislative jurisdiction over topics related to digitalization. The House, for example, has 20 standing committees, each having many different subcommittees (about 100). Each committee has different legislative jurisdictions. Committees have different functions. Committees in Congress are the ones writing legislation. It is very difficult to introduce any bill without any committee action. That way, the committees are quite powerful. Within their assigned areas, the committees gather information, compare and evaluate legislative alternatives, identify policy problems and propose solutions, select, determine, and report measures for full chamber consideration, monitor executive branch performance (oversight); and investigate allegations of wrongdoing. In some cases in areas that cut across committee jurisdictions. Most standing committees recommend funding levels – authorizations – for government operations and for new and existing programs.

On average the number of members in a committee in the House varies between 13 to 56 members; with an average number of 10 members per subcommittee. The number of members in a committee in the Senate consists of 17-18.

It is important to point out that most standing committees form **subcommittees** to share specific tasks within the jurisdiction of the full committee. Subcommittees are responsible too, and work within the guidelines established by their standing committee. Subcommittees are usually created to consider and report bills. Their parent committee may also assign their subcommittees such specific tasks as the initial consideration of measures and oversight of laws and programs in the subcommittees' areas.

There are few chamber and party rules which apply to subcommittees. Therefore, the number, prerogatives, and autonomy of subcommittees vary among committees.

Some standing committees create independent subcommittees with considerable staff and budgets. They routinely refer measures to subcommittees for initial consideration and allow subcommittees to take the lead in framing issues, drafting measures and reports, and holding hearings and markups. But on other committees, most work is undertaken by the full committee. Also, some full committees repeat the actions taken by their subcommittees, while others review only major subcommittee work or even forward subcommittee-reported measures to the plenary with no or little change.[133]

Although Congress mainly consists of standing committees focusing on macro issues, Congress will sometimes form a **select** or special committee for a short time period and specific purpose, frequently an investigation. Such commissions are typically created by either law or House resolution, sometimes to conduct investigations and studies and, on other occasions, also to consider measures. Some select and special committees have the authority to draft and report legislation. Often, select committees examine emerging issues that do not fit clearly within existing standing committee jurisdictions or cut across jurisdictional boundaries. A select committee may be permanent or temporary. For example, there is a Select Committee on the Modernization of Congress initiated at the beginning of 2019. Their task is to "to investigate, study, make findings, hold public hearings, and develop recommendations on modernizing Congress".[134] They have published some recommendations already of which number 17 is "reestablishing and restructuring an improved Office of Technology Assessment" (see box 1).[135]

Unlike in the British Parliament, so far no select committee on specific digital issues was initiated. Only in 2017 Democratic Senator Chris Coons of Delaware and Republican Senator Cory Gardner introduced bipartisan legislation to create a Select Committee on Cybersecurity, but this committee has not yet come into existence.[136] The interviewees point out that most standing committees already look from their specific political domain to issues of digitalisation, like defense, health care, etc. The digital issues will mostly express themselves in the existing structure.

The interviewees add that the function of a select committee – studying a specific topic for a period of time for example on 5G or AI – is mostly taken up by the caucuses or Congressional Member Organisations (CMOs, see next section). The members of these caucuses subsequently lobby the members of the committees of

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133 https://www.senate.gov/CRSpubs/312b4df4-9797-41bf-b623-a8087cc91d74.pdf.
134 https://modernizecongress.house.gov/.
135 https://modernizecongress.house.gov/committee-activity/recommendations.
136 https://www.congress.gov/bill/115th-congress/senate-
   resolution/23?q=%7B%22search%22%3A%5B%22select+committee+on+cybersecurity%22%5D
   %7D&r=1.

jurisdiction to attain certain goals; they can have quite some influence on the political process.

Joint committees – at least as they currently exist – are different kinds of entities. They may be temporary or permanent bodies. Their defining characteristic is a membership composed of equal numbers of Representatives and Senators. They are having jurisdiction over matters of joint interest. An example of a joint committee is the Joint Committee on the Library.

However, since the Gingrich Revolution in 1994, the power of the committee was bypassed by a strict chain of command in which subcommittee and full committee Chairmen took direction from party leaders. The committees became less of the practical mechanism they used to be by which parties exercised and even shared power in Congress. While the majority party use to determine most policy results, the inherently democratic process of open hearings, markups and voting, and the existence of cross-party coalitions allows minority members to engage the majority in debate, publicize issues, etc. Shifting decision making from committees to leaders or leadership groups has been diminishing the minority's role in the legislative process.

There are also congressional **advisory commissions** that are formal groups established to provide independent advice. The commissions usually are composed of policy experts chosen by Members of Congress and/or officials in the executive branch. They make recommendations for changes in public policy, to study or investigate a particular problem, issue, or event, or to commemorate an individual, group, or event. Commissions may hold hearings, conduct research, analyze data, investigate policy areas, or make field visits as they perform their duties. They exist temporarily, are established by Congress and reports to Congress. Commissions provide a highly visible forum for important issues and assemble greater expertise than may be readily available within the standing committees. Complex policy issues can be examined over a longer time period and in greater depth than may be practical for legislators. Also, the nonpartisan character of most congressional commissions may make their findings and recommendations more politically acceptable, both in Congress and among the public. Individual congressional commissions often have an organizational structure and powers that are quite different from one another.[137]

There are two advisory commissions on digital issues at the moment:

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137 https://fas.org/sgp/crs/misc/R40076.pdf.

- The **Cyberspace Solarium Commission**, initiated in May 2019. This Commission will issue recommendations for a national strategy for cyberspace in Spring 2020.[138]
- The **National Security Commission on Artificial Intelligence**, initiated in August 2019, has to deliver a final report in October 2020.[139] The aim of this congressional commission is: "to consider the methods and means necessary to advance the development of artificial intelligence, machine learning, and associated technologies by the United States to comprehensively address the national security and defense needs of the United States."[140]

The relevant standing committees of the House of Representatives and the Senate on digital issues are mentioned below in the table.[141] Many different committees in the House of Representatives and the Senate address issues related to the digital transformation of society. Later on in this section, we will address two standing (sub)committees which are comparatively more involved in digital issues, in more detail:

- The House Committee on Science, Space & Technology.
- The subcommittee on Consumer Protection & Commerce of the House Committee on Energy & Commerce.

Table 1 Committees and subcommittees in the 116th Congress discussing digital issues in hearings (as per October 2019)

Committee	Subcommittee	Relevant topics recently discussed in Hearings (116th Congress)
House Committee on Energy & Commerce	**Communications and Technology**	• Improving the Nation's Broadband Maps (September, 2019) • Stopping scam Robocalls (August, 2019) • Reauthorisation of the Federal Communication Commission (FCC) • 5G network vs. American competitiveness • Data security
	Consumer Protection & Commerce	• Self-driving car legislation (SELF drive Act) • Improving consumer's financial options with FinTech

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138 https://www.lawfareblog.com/announcing-cyberspace-solarium-commission.
139 https://www.nscai.gov/home.
140 https://fas.org/sgp/crs/misc/RL33313.pdf.
141 With special thanks to Imrre Grevers and Sigrid Johanisse at the Innovation Attaché Network van het Ministerie van Buitenlandse Zaken in Washington for making both overviews.

		• Internet of Things • Securing consumer's credit data in the age of digital commerce
	Energy	• Electricity sector's efforts to respond to cybersecurity threats • Modernising energy and electricity delivery systems
	Health	• Regulation of medical technologies • Health information technology
House Committee on Homeland Security	**Cybersecurity, Infrastructure Protection and Innovation**	• Cybersecurity challenges for State and Local Governments • Growing and diversifying the cyber talent pipeline • The Small Business Innovation Program to develop solutions to homeland security challenges
House Committee on Oversight and Reform	**Economy and Consumer Policy**	• Improving Cybersecurity at Consumer Reporting Agencies
	National Security	• Securing the Nation's Internet Architecture • Securing U.S. Election Infrastructure and Protecting Political Discourse
House Committee on Science , Space & Technology	**Energy**	• The Future of Electricity Delivery: Modernizing and Securing our Nation's Electricity Grid
	Research and Technology	• Election Security: Voting Technology Vulnerabilities
House Committee on Transportation & Infrastructure	**Aviation**	• Unmanned aircraft systems (UAS) and other new aircraft

	Highways and Transit	• Mobility on Demand (MOD) in surface transportation policy • Emerging technologies in the trucking industry
House Permanent Select Committee on Intelligence		• Security challenges of artificial intelligence (AI), manipulated media, and "deep fake" technology

The relevant standing committees of the Senate on digital issues are:

Committee	Subcommittee	Relevant topics recently discussed in Senate hearings (116th Congress)
Senate Committee on Armed Services	**Cybersecurity**	• Defense Industrial Base Cybersecurity Policy & Responsibilities • Artificial Intelligence Initiatives within the Department of Defense • Cyber Operations to Defend the Midterm Elections
Senate Committee on Commerce, Science & Transportation	**Full Committee**	• Press release: Settlement between FTC and Facebook • Protecting consumers in the era of major data breaches • Policy Principles for a Federal Data Privacy Framework • Broadband Mapping: Challenges and Solutions • Winning the Race to 5G and the Next Era of Technology Innovation in the United States
	Manufacturing, Trade and Consumer Protection	• Small Business Perspectives on a Federal Data Privacy Framework

	Communications, Technology, Innovation and the Internet	• Transforming Rural America: A New Era of Innovation • Understanding the Use of Persuasive Technology on Internet Platforms • The Impact of Broadband Investments in Rural America
	Security	• Strengthening the Cybersecurity of the Internet of Things
Senate Committee on Health, Education, Labor & Pensions	Full Committee	• Implementing the 21st Century Cures Act: Making Electronic Health Information Available to Patients and Providers
Senate Committee on Judiciary	Full Committee	• Protecting Innocence in a Digital World • Understanding the Digital Advertising Ecosystem and the Impact of Data Privacy and Competition Policy • 5G: National Security Concerns, Intellectual Property Issues, and the Impact on Competition and Innovation • GDPR & CCPA: Opt-ins, Consumer Control, and the Impact on Competition and Innovation
	Antitrust, Competition Policy and Consumer Rights	• Competition in Digital Technology Markets: Examining Acquisitions of Nascent or Potential Competitors by Digital Platforms (sept, 2019) • Enforcement of the antitrust laws
	Intellectual Property	• Examine innovation in America, focusing on how Congress can make our patent system stronger.
	The Constitution	• Google and Censorship through Search Engines • Stifling Free Speech: Technological Censorship and the Public Discourse
Senate Committee on	Full Committee	• The importance of energy innovation to economic growth and competitiveness.

Energy & Natural Resources		• Opportunities for the expanded deployment of grid-scale energy storage in the United States. • Renewable Energy and Energy Efficiency Efforts in the U.S.
Joint Economic Committee	Full Committee	• The Economic Impacts of the 2020 Census and Business Uses of Federal Data.
Senate Special Committee on Aging	Full Committee	• Aging and Disability in the 21st Century: How Technology Can Help Maintain Health and Quality of Life.

Congressional Member Organisations (CMOs)

There are also caucuses within Congress that pursue legislative objectives related to digitalization. Caucuses are Congressional Member Organisations (CMOs). They can be found with both the House and the Senate. CMOs are groups of Senators or House Representatives (sometimes a combination of both) that wish to pursue common legislative objectives. CMOs can be both formal and informal.[142] Most CMOs come together for a variety of reasons. Often the objectives of the groups coincide with members' policy objectives or representational considerations. They serve as forums for the exchange of information and they facilitate interactions among members who might not otherwise have opportunities to work with one another. CMOs have no advantages in the legislative process. They are simply 'coalitions of the willing' with a shared passion for a certain topic. There were 854 caucuses during the last 115th Congress.

CMOs typically exist as forums to discuss ideas and potential activities related to public policy or representational considerations. Groups may engage in direct legislative advocacy for a particular issue or concern, provide opportunities to educate members and staff on policy matters, or generate broader public awareness on these topics. Some informal member organizations may have a relatively narrow legislative interest or objective. Other groups may have a broader focus and address multiple issues of concern for a particular geographic region,

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142 Formal House CMOs are registered with the House Administration and governed under the rules of the House; therefore, they can utilize some personal office resources in support of CMO legislative activities. Senate CMOs are not registered and are thus often referred to as informal member groups. Unlike their House counterparts, Senate CMOs receive neither official recognition nor funding from the chamber.

economic sector, or generalized policy area such as digitalization issues. Many members view their participation in activities as a means to realize both electoral and policy objectives.[143] There is a lot of difference though in how active the different caucuses are.

There is a list of the formal House CMOs which is revised in June 2019.[144] The relevant House CMOs in relation to the political debate on digitalization are:

- 5G caucus. It was founded as a means to educate members of Congress on the importance of 5G technologies, the key role it plays in economic growth and digital innovation, and the role Congress can play to unleash its power in this country.[145] Recently discussed the (midband) spectrum efficiency issue in cooperation with the Federal Communication Commission (FCC).
- Digital trade caucus. The caucus aims "to promote a U.S. trade policy that works in the digital economy"[146] by "protecting cross-border digital trade from governmental protectionism."[147] They recently discussed the USCMA digital trade chapter, the trade barriers with China and the French digital services tax.
- Unmanned systems caucus. Its goal is to educate members of Congress on every facet of the industry of drones. The caucus works closely with industry to ensure to expand this sector through efficient government regulation and oversight.[148] They focus recently on the development of drones and suitable government policy.
- Smart cities caucus. This caucus is dedicated to issues related to the transformation of our communities to smart cities, how it will bring about innovation and technological change, and the role that Congress can play in this transformation.[149] They focus on infrastructure, connectivity, sustainability and labour market.
- Cybersecurity caucus. This caucus aims to help raise awareness and provide a forum for Members of Congress representing different committees of jurisdiction to discuss the challenges in securing cyberspace.[150] They recently focused on crucial infrastructure.

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143 https://fas.org/sgp/crs/misc/R40683.pdf.
144 A list of all the CMOs can be found here:
    https://cha.house.gov/sites/democrats.cha.house.gov/files/documents/cmo_cso_docs/116th%20C
    MOs_06-03-2019.pdf.
145 https://susanwbrooks.house.gov/media-center/press-releases/brooks-and-dingell-host-first-5g-
    caucus-briefing.
146 https://delbene.house.gov/news/documentsingle.aspx?DocumentID=1861.
147 https://thehill.com/policy/cybersecurity/331370-reps-create-digital-trade-caucus.
148 https://web.archive.org/web/20111008030923/http://unmannedsystemscaucus.mckeon.house.gov/
    about/chairmans-message.shtml.
149 https://www.smartcitiesdive.com/news/lawmakers-congressional-smart-cities-caucus/519091/.
150 https://cybercaucus-langevin.house.gov/.

- Virtual, Augmented and Mixed Reality Technologies caucus. This caucus was formed to discuss emerging technology that will spur innovation in the fields of entertainment, education and healthcare.[151]
- Artificial Intelligence caucus. The goal of the Congressional Artificial Intelligence Caucus is to inform policymakers of the technological, economic and social impacts of advances in AI and to ensure that rapid innovation in AI and related fields benefits Americans as fully as possible.[152]
- Internet & Internet of Things caucus. It looks at issues including spectrum, privacy, and regulatory policy surrounding Internet-connected devices and systems.[153]
- Smart transportation caucus. The caucus will encourage the development and deployment of existing and next-generation technologies, including connected and automated vehicle safety technologies, smart infrastructure, advanced traffic and freight management systems, real-time transit and parking technologies.[154]

Support staff

The support system of the standing committees consists partly of personal staff of the members of the committee, and partly of permanent staff of the committee itself. In both the House and the Senate, the structure of the personal staff divers greatly, largely depending on whether a Member of Congress chooses to empathize constituent service – a wide array of non-legislative activities undertaken to help out their constituents – or legislation. Members are also often assisted by staff of the committees and subcommittees on which they serve and it is not unusual for a staff member to perform both committee work and personal office work, regardless on which payroll he or she is on. The support for committees is mostly divided into democratic and republic staff (minority and majority staff). Both minority and majority staff have its own staff director.

The number of staff members differs per committee; it depends on the number of members and the budget a committee has. A senator's staff may range in size from fewer to 20 to more than 60. A member of the House is limited to 18 full-time and 4 part-time staffers.

The introduction of legislation in Congress a rather simple procedure, but whether the legislation ever gets enacted into law depends. Every year thousands of pieces of legislation are introduced, but a relatively small number becomes law. Committee staff has expertise on the subjects of their (sub)committee; they play an important role in the reviewing stage that legislation comes under at the committees.

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151 https://delbene.house.gov/news/documentsingle.aspx?DocumentID=1953.
152 https://artificialintelligencecaucus-olson.house.gov/.
153 https://www.multichannel.com/news/reps-issa-delbene-launch-iot-caucus-386882.
154 https://debbiedingell.house.gov/news/documentsingle.aspx?DocumentID=1314.

The tasks of the staff of a standing committee or subcommittee vary and consist of:
- drafting legislation;
- reviewing documents submitted in response to committee information requests;
- coordinating hearings and witnesses; drafting statements, memos, and briefing materials;
- providing guidance to offices;
- conducting policy and (legal) research;
- preparing for hearings and markups;
- participate in Congressional oversight and investigations;
- conduct research on topics within the committee's jurisdiction;
- provide technical and legal analysis of pending legislation.

The number of staffers supporting congressional committees has dropped significantly.[155] Between 1994 to 2014, overall committee staffing was reduced by 35 percent. Most likely as a consequence, the number of hearings held in the House declined also from 6,000 hearings per year in the 1970s, to about 4,000 hearings in 1994, and to just over 2,000 hearings in 2014.

Members of Congress cannot only appeal to the supporting staff of the committees and their own personal staff, but also on four other important nonpartisan bodies within Congress:
6. a legislative bureau (Office of General Counsel, OGC);
7. a bureau that provides budgetary and economic analyses (Congressional Budget Office, CBO);
8. a service as part of the Congressional Library that provides public policy research to Congress (Congressional Research Service, CRS);
9. a large independent research organisation conducting research for the whole of Congress (Governmental Accountability Office, GAO).

Below we will focus briefly on the CBO, CRS and GAO. All of them are relevant in respect to the central question of this study on how Congress organizes their demand for knowledge on digitalization issues.

The interviewees note that Congress is not short of information providers. The real challenge is to filter and absorb the right information for Members of Congress. CRS and GAO are working on improving this.

Congressional Budget Office (CBO)
CBO is an office within Congress that since 1974 produces independent analyses of budgetary and economic issues to support the Congressional budget process.

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155 https://www.washingtonpost.com/news/monkey-cage/wp/2017/06/14/congressional-committee-staffs-have-shrunk-heres-one-way-congress-makes-up-the-difference/.

The office produces reports and cost estimates for proposed legislation. CBO is strictly nonpartisan. CBO does not make policy recommendations, and each report and cost estimate summarizes the methodology underlying the analysis. Sometimes their reports or cost estimates touch upon the subject of digitalization. Take, for example, the Deep Fake Report Act of 2019. CBO estimated that enacting would cost less than $500,000 over the 2019-2024 period.[156] Or a cost estimate on measuring the economic impact of Broadband Act of 2019. CBO states here that it would cost $2 million over the 2019-2024 period for the Bureau of Economic Analysis (BEA) to coordinate with several federal agencies and to produce the required analyses and reports. [157]

Congressional Research Service (CRS)
The Congressional Research Service (CRS) is part of the Library of Congress and works exclusively for the United States Congress, providing policy and legal analysis to committees and members of both the House and Senate, regardless of party affiliation. CRS offers quick-turnaround consultative – and if needed confidential – services in science and technology related to policy and legislative issues and also offers classes on certain issues for staff members, like on AI. CRS publishes, for example, short policy analysis on what laws apply when it comes to AI. They can be compared to the European Parliamentary Research Service (EPRS) at the European Parliament.

Government Accountability Office (GAO)
The U.S. Government Accountability Office (GAO) is an independent agency that works for Congress. Oversight of the government is their main task. GAO is often called the "congressional watchdog". It examines how government money is spent and provides Congress and federal agencies with nonpartisan information to help the government save money and work more efficiently. GAO is working at the request of congressional committees or subcommittees. Its work is statutorily required per congressional protocols. GAO's work is similar to the Netherlands Court of Audit (Algemene Rekenkamer) and have like them the legal statutory authority to federal information.

GAO has only last year – in 2019 – started two new initiatives to reorganize and enhance their capacity in the field of science and technology: the Science, Technology Assessment and Analytics (STAA) team and the Center for Strategic Foresight. We will address both in the last paragraph of this chapter. It is these two bodies within GAO that produce different reports in the domain of digitalization. For example on the future of warfare: a report on how the army is preparing for cyber and electronic warfare threats and what government should be aware of, like

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156 https://www.cbo.gov/publication/55559.
157 https://www.cbo.gov/publication/55303.

assessing the staffing, equipping and training of new organizations.[158] But also a range of reports on cybersecurity[159] and on the effective protection of technologies critical to the US National Security interests.[160] Both high risk issues according to GAO. GAO also produces Science and Tech highlight policy briefs of two pages on issues like blockchain[161], hypersonic weapons[162], etc. This is part of the continuous reports on technological and scientific developments that affect US society, environment and economy.

From the interviews, we learned that GAO has to make an effort to serve both political parties and both chambers. In the past, GAO has lost about 40% of its staff (see section on Budget), partly because Republicans had the impression that GAO was not enough non-partisan.

Working method of the permanent committees
Standing committees meet at least once each month. Almost all standing committee meetings for transacting business must be open to the public unless the committee votes, publicly, to close the meeting. The different congressional committees – but also the commissions and caucuses – also organize hearings with experts from academia, industry or non-governmental organisations from the US or abroad. A hearing is the principal formal method by which United States congressional committees collect and analyze information in the early stages of legislative policymaking. Whether confirmation hearings, legislative, oversight, investigative, or a combination of these, all hearings share common elements of preparation and conduct. Hearings usually include oral testimonies from witnesses and questioning of the witnesses by Members of Congress.[163]

Following an introduction in the House or Senate, a bill, resolution or other (policy) measure is normally referred to one or more committees in that body. In the House, measures are referred by the Speaker primarily to one committee, with additional referrals to other committees that also maintain jurisdiction over the matter covered by that measure. The primary committee to which a measure is referred is called the "lead committee."

For this study we will focus on three working modes which might be of interest to the Temporary Committee on the Digital Future in the Dutch House of Representatives:

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158 https://www.gao.gov/products/GAO-19-570.
159https://www.gao.gov/key_issues/ensuring_security_federal_information_systems/issue_summary?
    from=topics#t=0
160
    https://www.gao.gov/key_issues/ensuring_effective_protection_of_technologies/issue_summary?f
    rom=topics.
161 https://www.gao.gov/products/GAO-19-704SP.
162 https://www.gao.gov/products/GAO-19-705SP.
163 https://en.wikipedia.org/wiki/United_States_congressional_hearing#Sources.

- House Committee on Science, Space and Technology
- The subcommittee on Consumer Protection & Commerce of the House Committee on Energy & Commerce
- The GAO Science Technology Assessment and Analytics (STAA) team and the Strategic Foresight Center

3.2   House Committee on Science, Space and Technology

ORIGIN & POSITIONING

The House Committee on Science, Space and Technology dates back to 1958, when it was established as the Committee on Science and Astronautics in order to foster innovation and stay competitive in the science and technology domains. The committee has a legislative jurisdiction, but its work and influence reaches beyond its legislative jurisdiction because of its "special oversight functions": "The Committee on Science, Space and Technology shall review and study on a continuing basis laws, programs and Government activities relating to non-military research and development"[164].

After several name changes, the committee now functions under the name of The House Committee on Science, Space and Technology. This committee currently has exclusive jurisdiction over the National Aeronautics and Space Administration (NASA), National Science Foundation (NSF), National Institute of Standards and Technology (NIST), and the White House Office of Science and Technology Policy (OSTP). The Committee also has authority over R&D activities at the Department of Energy (DOE), Environmental Protection Agency (EPA), Department of Transportation (DOT), Federal Aviation Administration (FAA), National Oceanic and Atmospheric Administration (NOAA), National Weather Service (NWS), and the Department of Homeland Security (DHS).[165]

The House Committee on Science, Space and Technology has 5 subcommittees on Energy, Environment, Research and Technology, Space and Aeronautics, and Investigations and Oversight.

Although these subcommittees sometime collaborate, for example in organizing hearings, for this study we consider the subcommittee on Research and

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164 House Rule X, clause 3, (k)—attached as Appendix A, as described in
https://science.house.gov/imo/media/doc/116th%20Congress%20-
%20SST%20Oversight%20Plan.pdf
165 https://science.house.gov/about/history-and-jurisdiction

Technology most relevant as this subcommittee is responsible for subjects on emerging technologies such as AI, self-driving vehicles, facial recognition, deep fakes etc. We will, therefore, focus on this subcommittee.

The subcommittee on Research and Technology has jurisdiction over the following federal research and development bodies: the Office of Science and Technology Policy (OSTP), the National Science Foundation (NSF), the Technology Administration of the Department of Commerce, the National Institute of Standards and Technology (NIST), the National Technical Information Service, and standards-related activities of the Department of Homeland Security. The OSTP is an organisation which has been established already in 1976. It provides the President and others with the White House advice on "the scientific, engineering, and technological aspects of the economy, national security, homeland security, health, foreign relations, the environment, and the technological recovery and use of resources, among other topics."[166] An example of the work OSTP is doing is: they recently published ten draft guiding principles for the federal government that have to be basis of all AI related legislation.[167]

The committee has a **legislative** function as it plays a role in drafting legislation and a **scrutinizing** function in overseeing the governmental bodies that fall under their jurisdiction. The latter is a large part of the work a committee is doing, according to the interviewee. Because the committee also has the opportunity to conduct research itself, it also has the functions to **inform** and **set the agenda** of Congress on digital issues. The committee has no coordinating function. Sometimes it is unclear under which committee a topic falls; the Chairs of these committees then negotiate with each other which committee takes up the responsibility. Sometimes many committees deal with the same topic, like privacy. In that case, coordination is taken place both at the level of the Chair, members and staff or through related caucuses.

SET-UP & APPROACH

The committee currently consists of 38 members and the subcommittee Research and Technology consist of 13 members.

The average staff of a subcommittee exists of 2 to 4 permanent staff members. Committees have the option to temporarily hire specialists such as economists, doctors, engineers, scientists to work in a specific area.[168]

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166 https://www.whitehouse.gov/ostp/

167 Belangrijkste boodschap is dat iedere nieuwe wet- en regelgeving gebaseerd moeten zijn op een grondige risico-assessment en kosten-baten analyse. OSTP waarschuwen expliciet tegen overregulatie.

168 https://www.sgim.org/File%20Library/SGIM/Communities/Advocacy/Advocacy%20101/THE-ROLE-OF-CONGRESSIONAL-STAFF.pdf

Based on the interview with a personal staff member, it is clear that staff members make use of a lot of different information sources in their work for the committee and the committee member they are working for. Hearings are an important source, but memos on oversight issues, legislation or key issues made by the committee staff are also informative. These memos are mostly not public. They also rely a lot on information coming from lobbyist working for companies – but this might be biased information – so they also get informed by universities, the Congressional Research Service and agencies like the Environmental Protection Agency. Especially when it comes to oversight issues, they rely on the Academy of Sciences. The caucuses also play a role in informing Members of Congress where they have off the record discussions with experts on different topics, including digital topics. But not all members show up at caucuses meetings. The professional network the personal staff and members have in their constituency is a very important source of information as well, more so that the information they get from hearings or other congressional services.

RESULTS

Only the hearings of the Committee on Science, Space & Technology can be found on the website of the committee as results.[169]

Table 2 Hearings on digital issues of the House Committee on Science, Space & Technology

Form	Subject	date
Field hearing	Smart mobility: it's a community issue	Oct 2019
Hearing	Online imposters and disinformation	Sept 2019
Hearing	Time change: AI and the future of work	Sept 2019
Hearing	AI: societal and ethical implications	June 2019
Hearing	Election security: voting technology vulnerabilities	June 2019
Hearing	Big data challenges and advanced computing solutions	July 2018
Hearing	Bolstering data privacy and mobile security: an assessment of IMSI catcher threats	June 2018
Hearing	AI: with great power comes great responsibility	June 2018
Hearing	Leveraging blockchain technology to improve supply chain management and combat counterfeit goods	May 2018
Hearing	Beyond bitcoin: emerging applications for blockchain technology	Feb 2018

IMPACT

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169 https://science.house.gov/hearings

From the interviews, we understand that impact of the committee on the federal government mostly exits of "ringing the alarm" and telling government to pay more attention to a particular topic. It is less about offering solutions. For example, it can also be that the committee pleads for a national strategy or they point that the US government is behind on a certain topic considering what other countries are doing. An example on agenda setting is that the committee is nowadays busy coordinating the national and local efforts on smart cities through new legislation. The most concrete impact the committee can have, is when they give extra funding to a certain agency for a specific task (Congress has the 'power of the purse'). That way they give direction to that agency.

3.3   House Subcommittee on Commerce & Consumer protection

ORIGIN & POSITIONING
The subcommittee on Commerce & Consumer Protection is part of the House Committee on Commerce and Energy – the oldest continuous standing committee in the U.S. House of Representatives dating back from 1795. This subcommittee is an interesting committee to further investigate as it covers topics such as data privacy, privacy and cybersecurity.

The jurisdiction of the subcommittee includes "interstate and foreign commerce (including all trade matters within the jurisdiction of the full committee), regulation of commercial practices (the Federal Trade Commission, including sports-related matters), consumer affairs and consumer protection (including privacy matters generally), data security, consumer product safety (the Consumer Product Safety Commission), product liability, motor vehicle safety, and regulation of travel, tourism, and time".[170]

Previously, the subcommittee was called '*digital* commerce and consumer protection'.

SET-UP & APPROACH
The subcommittee on Commerce & Consumer Protection consists of 23 Members of Congress. The way this subcommittee works can be compared with the Committee on Science, Space and Technology (see before).

RESULTS

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170 https://energycommerce.house.gov/subcommittees

Form	Subject	date
Hearing	Autonomous vehicles: promises and challenges of evolving automotive technologies	Feb 2020
Hearing	Americans at risk: manipulation and deception in the digital age	Jan 2020
Hearing	Oversight of the Federal Trade Commission: strengthening protection for Americans 'privacy and data security	May 2019
Hearing	Protecting consumer privacy in the era of big data	Feb 2019

IMPACT

We have not been able to interview any one at the committee staff which makes it difficult to make any statements on the impact of this committee on the political debate on digitalisation in Congress.

3.4   The GAO Science Technology Assessment and Analytics team and the Strategic Foresight Center

ORIGIN & POSITION

The US Government Accountability Office (GAO) is the independent, nonpartisan agency that works for Congress. The 2019 Legislative Branch Appropriations Bill Conference Report encouraged GAO to reorganize its technology and science function by creating a new office within GAO and to report to the Legislative Branch Appropriations Subcommittees on plans for doing so.

Previously, the Office of Technology Assessment (OTA) was the supporting agency for congress on science and technology and many European sister organizations like the Rathenau Instituut in The Netherlands, POST in British Parliament and TAB in the Bundestag, were established following the example of the OTA. However, in 1995, the OTA was lifted under the lead of the Republicans. Recently there has been a new bill introduced for a revised OTA (see Box 1). More importantly, after the poor quality of senators' questions during an April 2018 hearings with Facebook's CEO Mark Zuckerberg, Congress took steps to establish several new supporting institutions which led to the establishment of STAA and the Strategic Foresight Center in 2019. These two institutions aim to support Congress with "oversight, insight and foresight" on technology and science issues.
GAO has traditionally been focusing on oversight, just like the Algemene Rekenkamer in The Netherlands. This is still an important task, but recently there is a felt need at GAO to focus on prospective governance instead of reactive governance.

Science Technology Assessment and Analytics team (STAA)
In 2019, GAO established the Science Technology Assessment and Analytics team (STAA) to build on their decades-long track record of providing Congress with science and technology (S&T) analysis. It was an initiative of GAO itself but Congress was in favor. The STAA team is the result of a reorganization within GAO. Existing staff was reallocated and new staff was hired. This was possible due to the funding they received in 2019.

The STAA team brings the various technology and science groups of GAO together under a single roof, serving "as a one-stop-shop for the technical expertise needed on Capitol Hill." The idea is that this way a better and full picture of technological and scientific developments can be given, including the social issues (social risks like equity, or bias), legal and economic implications. This expertise is much needed, because when it comes to technology issues, political debates in Congress are often driven by outside interest groups. Congress members need to be able to evaluate and check the statements of these groups and their claims.[171]

STAA, like GAO, works in direct service of Members of Congress and congressional staff (in 2018 97% of their work was requested directly by Congress or required by statute). From the interviews we can conclude that STAA gets request from all kinds of committees (85%) and it can be quite complicated to keep the balance in serving all committees. 10% of their work is based on the mandate of GAO: they have to do certain work as it is required by law from GAO and 5% of their work is initiated by themselves, without a request; these are mostly studies on cross-cutting governmental issues or on a high risk issue.[172]

The function of STAA is to support Congress by:
- **Informing** through:
  - **Technology assessments (TA);** TA reports on potential policy implications of new technologies. A recent one on AI was based on an expert forum with participants from industry, government, academia and non-profit organizations.
  - **Technical assistance**: informal (technical) briefings and other assistance to members of Congressional staff in a very short time frame, such as on biodetection systems, big data, artificial intelligence, IT, and cybersecurity issues. STAA also gets phone calls from individual Members of Congress with basic questions about for example deep fakes. STAA supports hearings with

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171 https://www.nextgov.com/policy/2019/04/gao-will-pour-15-million-new-tech-assessment-office-2020/156261/.
172 More informatioin on GAO's congressional protocols, for example on how they set their priorities, see https://www.gao.gov/assets/700/695657.pdf.

technical assistance, i.e. helping out designing the hearing or closed door roundtables and assisting at these meetings. They also brief new committee staff on topics or agencies within their portfolios.

- o **Best practices in engineering sciences**; compiling and utilizing best practices in engineering sciences, including cost, schedule, and technology readiness assessments.
- o **Establishing an audit innovation lab**; to explore, pilot, and deploy new advanced analytic capabilities, conduct research in information assurance, and explore emerging technologies that will impact future audit practices.

- **Scrutinizing** the federal government by:
  - o **Oversight of federal technology and science programs**. Auditing science and technology programs and initiatives to assist in oversight of federal investments in research, development, and advanced manufacturing. It covers oversight work on different topics including digitalization, like US competitiveness in quantum computing, fin tech and regulatory oversight, border security technology, technology that tracks military aircraft, electromagnetic risks to the electrical grid, etc.
- **Advising** through:
  - o STAA, or GAO for that matter, has no authority to set the agenda in Congress. As the interviewees state it: "We are all civil servants, no political institutions." STAA does aim to be a trusted advisor for all Members of Congress, that way they can have the most impact. For example, they are regularly asked by representatives or senators to give their opinion on what they are concerned with the most. And nowadays, STAA is also aiming at identifying policy implications based on scenarios where they point out what could be done in terms of policy options – each with its pros and cons – for example in a recent rapport of the use of AI in discovering drugs.
- **Coordinating** through:
  - o STAA is always trying to look through a bigger lens in their main reports. For example, their recent study on AI did not start from the domain of a particular domain of a committee, but they took a broader perspective and deliberatively took "a deep dive". Standing committees focus usually only through a small lens while digital issues are generally very large scale. STAA is trying to raise awareness about the broader perspective of technological issues.
- **Legislative** through:

     o   Providing context and issues to consider regarding draft
          legislation.

Center for Strategic Foresight

Next to the STAA team, the Center for Strategic Foresight was even more recently initiated in September 2019. The center is part of GAO too, under the roof of the Office of Strategic Planning and External Liaison. GAO is doing foresight for more than 30 years already, but focused on the future of GAO itself as an institution. Now GAO created the center to enhance its ability to broader identify, monitor, and analyze emerging issues and their implications, opportunities and challenges: what is going to be important to Congress and the American people? It monitors what is on the horizon in the next 10 to 15 years and how these are interacting with other trends, particularly in technology, but not just in technology. Next to providing insight on emerging trends and managing forward-looking federal programs, the center will also give GAO advice on internal strategic planning and the methods it is using to analyze new technologies and processes.

The differences with the STAA team is that the center plans to maintain a broader scope, complementing efforts like those of the STAA team, which is taking a more direct advisory role for Members of Congress. The Center's goal will be to look at these trends from a broader perspective, while STAA works in a deeper, focused way at the technologies that comprise the bigger, broader topic. In short, the Center for Strategic Foresight writes the science fiction version of the more technical analysis of STAA while looking at the technologies and advancements coming up and how those will affect society as a whole, as well as the form and function of government.

Box 1 A revised Office of Technology Assessment?

On 19th September 2019 the Office of Technology Assessment Improvement and Enhancement Act was introduced by two members of the House of Representatives and two senators, both Republican and Democrats.[173] The act introduces enhancements to the *still* existing Office of Technology Assessment (OTA) statute (2 US Code §472) to make improvements to the OTA by making it more accessible and responsive to Members' needs. This requires that advice be provided in a timely manner and that the office remains staffed with experts with current experience in relevant fields. From the interviews, we understood that the 'OTA revival community' mostly consists of Democrats and focus themselves more on governance questions than the actual mission or output of a revised OTA.

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173 https://www.congress.gov/bill/116th-congress/house-bill/4426.

In the meantime, a review report of the National Academy of Public Administration (NAPA) has been recently published on the request of CRS.[174] The report reviews current resources available to Members of Congress on Science & Technology and assess the potential need for a separate entity charged with the mission to provide non-partisan advice on S&T issues. Their recommendation is that both the CRS and GAO (STAA) services should be enhanced *and* create a separate advisory office called the Office of the Congressional S&T Advisor (OCSTA), which would focus on "efforts to build the absorptive capacity of Congress, to include supporting the recruitment and hiring of S&T advisors for House and Senate committees with major S&T oversight responsibilities. OCSTA would also be responsible for horizon scanning."

However, the bill still has to pass the House and the Senate though before it goes to the President and can become a law. With the STAA and Center of Strategic Foresight recently established and planning to expand, the question remains if a revised OTA would have enough reason to exist. The recently published NAPA report does see an added value for a separate office.

SET-UP & APPROACH

The governance structure at GAO also applies to the STAA team. These include statutory independence, Congressional protocols, external advisory boards and quality assurance processes such as peer review.

The STAA team includes technical specialists and policy analysts. The team is headed by two managing directors, John Neumann and Tim Persons (who is also the Chief Scientist). Currently there are 49 full-time employees working at STAA but they aim to 100-140 employees in the near future. According to its expansion plan, the office will be divided into four groups[175]:

- A 25-person technology assessment and technical assistance team that will conduct forward-facing studies on emerging technologies.
- A 23-person science and technology program oversight team that will monitor the performance of federal science and tech initiatives.
- An 11-person engineering sciences team that will advise agencies on tech investments.
- A 6-person innovation lab that will explore and develop new data analysis and auditing tools.

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174 https://www.napawash.org/uploads/Academy_Studies/NAPA_FinalReport_forCRS_110119.pdf.
175 https://www.nextgov.com/policy/2019/04/gao-will-pour-15-million-new-tech-assessment-office-2020/156261/

In addition to the permanent staff for STAA's four core groups, STAA is exploring additional flexibilities that would allow them to actively recruit staff to meet project-specific needs.[176]

Unlike prior GAO technical assessments, the STAA team includes policy options for Congress, when relevant, in its technical assessments, next to the policy implications they already address in their TA studies. This shift is based on feedback from Members of Congress and congressional staff. STAA intends to provide a "fact-based, nonpartisan analysis of the potential benefits and trade-offs associated with each option."[177]

The STAA team is working with two external advisory boards: one to help anticipate emerging technologies, and another to peer-review assessments. The STAA group is also forming partnerships with the National Academies of Sciences, Engineering, and Medicine to tackle topics such as artificial intelligence in health care. The aim is that such partnerships will enhance the turnaround time and quality of the analyse of STAA.[178]

The Center for Strategic Foresight
Their work might result at times in a more traditional-looking report. At others, it will take the form of an informal briefing ahead of committee hearings, more formal briefing or some other type of product. The first for GAO non-traditional product coming out the center was an inaugural conference on the emerging threat of deep fakes and the longstanding challenges of deep space travel and observation. The centre is considering scheduling more conferences in the future in order to inform Members of Congress on the major impact of technology on society in relation to demographic, economic and environmental trends.

The center wants to function as a platform engaging with the outside world in their foresight work. Currently there are nine non-resident Fellows who are leading experts in foresight, planning, and futures studies. Their backgrounds include stints in government, the private sector, non-governmental organizations, academia, and international organizations. A list of members is stated in the press release.[179] Each will serve for a two-year, renewable term, according to the Center's charter.

The center will use both the expertise of the fellows but also external expertise to get a more comprehensive understanding of an issue and explain it in very simple

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176 https://www.gao.gov/pdfs/about/GAOSc
ienceTechPlan-2019-04-10.pdf
177 Idem 11.
178 https://cen.acs.org/policy/legislation-/Meet-group-providing-science-technology-information-to-the-US-Congress/97/i37.
179 https://www.gao.gov/about/press-center/press-releases/center-for-strategic-foresight.htm.

terms so that it can be used in helping to ensure Members of Congress have the right knowledge.

Budget

Although the absolute budget of GAO generally increased in the past decades, its percentage of the total federal budget decreases (from 0.03% in 1995 to 0.01% in 2020). Its number of staff decreased by almost 40% in the past decades.[180] GAO has expanded its science and technology output, though this is not one of GAO's top commitments due to a limited staff.[181] However, GAO will spend 15 million dollars in 2020 on STAA.[182]

RESULTS

In the year 2018, GAO provided 34 congressional committees with nearly 200 products covering a wide range of science, technology, and IT issues, including cyber security.

Next to the earlier mentioned technology assessments (reports on critical technological developments), performance audits (scrutiny reports of federal science agencies) and best practice guides in the engineering sciences (on costs, schedule, and technology readiness assessments), the STAA team also recently started to publish Science & Tech Spotlights. These are 2-page quick reads for policymakers and the public. Each Spotlight gives an overview of an emerging development in science and technology, the opportunities and challenges it brings, and the relevant policy context.[183] Their first Spotlight document focused on the following subjects: hypersonic weapons, probabilistic genotyping software, opioid vaccines, and blockchain & distributed ledger technologies. According to the interviewees, the Spotlights are meant to give Members of Congress a quick tutorial on a certain topic. So far, Congress seems to be content with this new format.
In the future, the STAA teams is considering assessing autonomous vehicles, border protection technologies, opioid-addiction vaccine development, and regenerative medicine.[184]

180https://www.researchgate.net/profile/Addison_Stark/publication/335665643_Congress_Needs_the
    _Office_of_Technology_Assessment_to_Keep_up_with_Science_and_Technology/links/5d72c23f
    a6fdcc9961b2a065/Congress-Needs-the-Office-of-Technology-Assessment-to-Keep-up-with-
    Science-and-Technology.pdf
181https://www.researchgate.net/profile/Addison_Stark/publication/335665643_Congress_Needs_the
    _Office_of_Technology_Assessment_to_Keep_up_with_Science_and_Technology/links/5d72c23f
    a6fdcc9961b2a065/Congress-Needs-the-Office-of-Technology-Assessment-to-Keep-up-with-
    Science-and-Technology.pdf
182 https://www.nextgov.com/policy/2019/04/gao-will-pour-15-million-new-tech-assessment-office-
    2020/156261/
183 https://www.gao.gov/technology_and_science#t=0
184https://www.researchgate.net/profile/Addison_Stark/publication/335665643_Congress_Needs_the
    _Office_of_Technology_Assessment_to_Keep_up_with_Science_and_Technology/links/5d72c23f
    a6fdcc9961b2a065/Congress-Needs-the-Office-of-Technology-Assessment-to-Keep-up-with-
    Science-and-Technology.pdf

Form	Subject	date
S&T spotlight	Deepfakes	Feb 2020
S&T spotlight	Blockchain & distributed ledger technologies	Sept 2019
Oversight report	Face recognition technology	June 2019
Report	Work force automation	Mar 2019
Report	Science & Technology report: Considerations for maintaining US Competitiveness in Quantum Computing, Synthetic Biology, and Other Potentially Transformational Research Areas	Sept 2018
Testimony[185]	AI: Emerging opportunities, challenges, and implications for Policy and Research	June 2018
Report	Technology Assessment: AI: Emerging opportunities, challenges and implications	Mar 2018

In their strategic plan 2018-2023 STAA outlines five trends they will focus on the coming period: genome editing, artificial intelligence and automation, quantum information science, brain-computer interfaces and augmented reality and cryptocurrencies and blockchain. So far their technology assessments have included the topic of 'digital Innovation and competitiveness' with reports on AI (2018), Internet of things (IoT, 2017), innovation in data analytics (2016) and 3D printing (2015).

The Center for Strategic Foresight plans to look into a wide variety of technologies and futuristic ideas, including acellular agriculture, genome editing, privacy issues, artificial intelligence, brain augmentation, 5G and quantum computing.

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185 Testimony given by one of the STAA directors before the Subcommittees on Research and Technology and Energy, Committee on Science, Space, and Technology at the House of Representatives.

Figure 1: Range of Science, Technology Assessment, and Analytics (STAA) team products

Source: GAO.

Source: https://www.gao.gov/pdfs/about/GAOScienceTechPlan-2019-04-10.pdf.

IMPACT

From the interviews, it is clear that the impact of STAA and the SFU is easier to measure when it comes to their oversight work than for their foresight work. In their oversight reports they analyse what is going wrong within certain troubled agencies. If the agencies address their recommendations and implement them successfully,

STAA can claim impact in terms of saving money and time. A causal link between the report and the political or policy reality is easier to find than with foresight. When it comes to technology assessments and foresight, STAA usually evokes a political discussion with their reports but it is much more challenging to measure exactly what the political impact is. "How do you know that you are doing anything good?", remains an important question for STAA which is always hard to answer. What has been done with their work is not always very visible. In some cases, it is traceable. For example, GAO's former cybersecurity work has contributed to major legislation on information security, including the Federal Information Security Management Act of 2002 (FISMA), the subsequent amendment to FISMA in 2014, and the Federal Cybersecurity Enhancement Act of 2015. Another example is on improving transparency and oversight to better safeguard privacy and accuracy of the use of face recognition technology by the Department of Justice (DOJ) and the Federal Bureau of Investigation (FBI). In 2016 GAO made six recommendations to address these issues. And as of May 2019, DOJ and the FBI had taken some actions to address three recommendations—one of which the FBI has fully implemented—but they have not taken any actions on the other three. This resulted in a new report by STAA.[186]

The interviewees pointed out that in order to build trust, STAA and CSF should not overpromise or under-deliver. A key factor to this is enough staff, at this moment STAA has to say no to a lot of requests.

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186 https://www.gao.gov/products/gao-19-579t.

4 Denmark

4.1 Introduction

Denmark is a unitary parliamentary constitutional monarchy. The monarch (Margrethe II) is head of state. In practice, the duties of the Monarch are strictly representative and ceremonial, such as the formal appointment and dismissal of the Prime Minister and other Government ministers.

The Danish Parliament – the Folketing (in Danish *Folketinget*) – is the unicameral national legislature. It consists of 179 representatives (including two members from Greenland and two members from the Faroe Islands), from 12 different parties.[187] General elections must be held every four years, but it is within the powers of the Prime Minister to ask the monarch to call for an election before the term has elapsed. On 5 June 2019 general elections were held, and by the end of June, a new government was formed. The Cabinet of Mette Frederikson took office on 27 June 2019. It is a minority government consisting of the Social Democrats.

The Folketing has 25 standing committees.[188] Each committee has its own political sphere of work, called a remit. Each committee remit is covered more or less by a ministerial sphere. A committee exercises parliamentary scrutiny and handles Bills and motions or proposals within its remit. The committee keeps a close eye on developments within its focus areas so that its members are adequately equipped to scrutinise the work of the government. As a rule, committee meetings are not open to the public. However, committees do hold many open sessions that are broadcast live on ft.dk. Sessions are also broadcast on the Danish Parliament's TV channel. At an open consultation, a committee invites a Minister to account for a current topic and answer committee members' questions about that topic.

The Folketing can also set up special committees to deal with individual matters or special subjects.[189] Likewise, the Folketing appoints delegations to participate in the work of various inter-parliamentary fora. A committee can also deal with matters, within its own sphere of competence, regarding which no bills have been moved in the Folketing. This is typically done by putting questions to a minister.[190]

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187 Website Folketinget, URL: https://www.thedanishparliament.dk/en/democracy/parliaments-composition
188 Folketinget i arbejdstøjet, udgave Oktober 2018.
     URL: https://www.ft.dk/~/media/sites/ft/pdf/publikationer/folketinget-i-arbejdstoejet_2018_web.ashx
189 https://www.ft.dk/~/media/pdf/publikationer/english/the-folketing_2013,-d-,pdf.ashx
190 https://www.legislationline.org/download/action/download/id/2065/file/Denmark_Parliamentary_
     System_2005.pdf

In the Folketing, the Domestic and Social Affairs Committee has digitalisation of the public sector as an explicitly mentioned subject within its field of responsibility. However, several other committees deal with digitalisation as part of other themes, to some extent mirrored to a specific ministry. Which committee deals with a specific topic depends on the actual topic. The Health Committee, for example, has had discussions on digitalisation and privacy. No committee or working group within the Danish Parliament has been established to deal with this subject only. But IT-spokespersons have been appointed.

There is one particular committee which is not concerned with the theme of digitalisation, but seems to represent an interesting working mode to look into in more detail. The Parliamentary Working Group on World Goals (*Parlamentarisk arbejdsgruppe om verdensmålene*) works with the UN Sustainable Development Goals until October 2020, after which its work will be evaluated and possibly continued. An important part of the working group's work is to ensure coordination of the work of the committees of the Folketing, which have a link with the goals.

4.2   The Parliamentary Working Group on World Goals

ORIGIN & POSITIONING

In 2018 the Folketing's Finance Committee has set up a working group on world goals (*Parlamentarisk arbejdsgruppe om verdensmålene*) to work thoroughly and purposefully with the UN's World Sustainable Development Goals.

Background

The Sustainable Development Goals (SDGs) are a collection of seventeen global goals to achieve a better and more sustainable future for all. They were set in 2015 by the UN's National Assembly and intended to be achieved by the year 2030. In 2017 Danish members of parliament from all parties in the Folketinget established a cross-political network for the UN's World Goals: *Folketingets Tværpolitiske Netværk for FN's Verdensmål* (the 2030-network). The network does not only aim at creating a forum for a broad and inclusive debate, but also a platform for collaboration with civil society business and others who are interested.

The interview with the professional committee staff clarified the initiative originated outside parliament. Especially NGO's and industry were very passionate about collaboration on this topic. Sustainability is an important social theme in Denmark. Consequently, 69 parliamentarians (roughly 1/3 of all MPs) got involved.

The purpose of the network is to promote the SDGs and monitor its implementation nationally and internationally by:

1.   contributing to knowledge sharing and debate to raise awareness of the world goals in Parliament and the public;
2.   focusing on world goals as a Danish priority in Parliament and other forums; and
3.   participating in dialogue with the Minister responsible for the Danish action plan for the world goals and the implementation of the 2030 agenda in general.[191]

In a letter of 2 May 2018,[192] the 2030-Network has asked all the committees of the Folketing to work on the world goals, so that the goals are taken into account in the ongoing political work.[193] The network proposes, among other things, the possibility of establishing a parliamentary working group on world goals across multiple committees, so it can make recommendations to the government. A number of committees, including the Committee on the Environment and Food, the Committee on Transport, Building and Housing, the Foreign Affairs Committee and the Energy, Supply and Climate Committee are currently discussing the world goals, while other committees have not yet decided how they work on the goals. It is argued that it can be valuable for someone to assume the overall responsibility and coordinating role in strengthening parliamentary work on the world goals of the Parliament, as it can contribute to progress in work on the world goals.

The parliamentary group and other initiatives on SDGs
Against this background, the Finance Committee has decided to appoint a parliamentary group. The Folketinget's website says it is for the first time in the history of the Finance Committee, the Committee has set up a parliamentary working group.[194]

During the interview, it was explained that a parliamentary working group usually consists of 29 members, and they are established to produce reports and recommendations within a period of 6-12 months. There have been other working groups before, concerned with cross-cutting topics. A parliamentary working group is always connected to a standing committee. Being a kind of sub-committee, the working group has no formal powers, but everything goes through the standing

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191 https://www.2030netvaerket.dk/om
192 The letter from the 2030-network to parliament in Danish:
       https://www.ft.dk/samling/20171/almdel/URU/bilag/194/1888194.pdf
193 Report by the Finance Committee on setting up a parliamentary working group on world goals (published on
       12 October 2018) URL: https://www.ft.dk/samling/20181/almdel/FIU/bilag/9/1952917.pdf
194 https://www.ft.dk/da/udvalg/parlamentarisk-arbejdsgruppe-om-verdensmaal

committee. Because of the cross-cutting topics, a working group usually connects at least two different committees.

The Working Group on World Goals is special because of its broad agenda, and link with the Finance Committee. The working group is anchored in the Finance Committee specifically because the Finance Committee is not bound by a single one responsibility. The world goals often affect more than one committee and concern both national and international politics and the economy. An anchor in the Finance Committee will ensure stability and continuity around the work. The Working Group on World Goals is set up for a period up to October 2020. The work will then be evaluated and possibly continued.

The most important purpose of the parliamentary group is to secure progress towards meeting the world goals in Denmark. The working group must ensure that coordination takes place of the work of the committees of the Folketing related to the world goals. In addition, the parliamentary group will be the initiator of discussions of new opportunities and solutions for working with the world goals until 2030.

In Denmark, there are many other initiatives concerned with SDGs. The "Denmark for the Goals" initiative (*Danmark for Målene*), for instance, is all about spreading awareness of the world goals throughout Denmark, by pulling something political down to Earth and into the everyday lives of our citizens, who can seriously help make the difference that is required. On the website[195] it reads this non-profit initiative is organized by Global Public (which acts as a secretariat for the network and assists in facilitating meetings and events) as well as 48 municipalities. They travel around the country with an information festival. Universities are also working fanatically on the SDGs.

The earlier mentioned network 2030 also established a 2030 panel to support the political work of the network through analysis, sparring, knowledge sharing and meetings. The panel consists of 22 organisations and advises the network for instance on topics and priorities for discussion. The network 2030 used to meet every month but now meets twice a month. According to our interviewee, 15 to 20 MPs are present at those meetings, which are primarily focused on sharing knowledge, not politics. During those meetings, experts are asked to enter into a dialogue, to which also ministers can be invited. However, because it is outside parliament, it is a rather informal working mode. The informal discussions focus on achieving a common understanding. Recently, it has been decided to move the secretariat of the network inside parliament by March 1. The purpose is to achieve

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195 https://www.danmarkformaalene.dk/om

less fragmentation. Currently, knowledge from the network is taken up by individual MPs who raise issues in their own committees. Merging the secretariat of the network and the Parliamentary Working Group is expected to improve the coordination.

The Ministry of Finance
As mentioned before, the Parliamentary Working group on World Goals is deliberately anchored in the Finance Committee. The Danish Ministry of Finance handles the government's follow-up to the world goals and has prepared the national action plan for the work.[196] The Ministry of Finance is responsible for maintaining a holistic approach and create linkages between the European and the national follow-up. The Ministry of Foreign Affairs is responsible for the SDGs in the context of the United Nations and other international fora. The Ministry of Finance and Ministry of Foreign Affairs maintain close coordination of efforts.[197]

It is noteworthy, also the Agency for Digitalisation was established by the Ministry of Finance (in 2011). This agency of the ministry builds on past strategies for e-government or more specific fields, to speed up the digitisation processes required to modernise the Danish welfare society (Strategy for Digital Welfare 2013-2020). The Agency is in charge of the digitisation of Denmark and is responsible for the implementation of the government's digital ambitions in the public sector.[198] In the new government, the new Minister for Public Innovation will also be responsible for the digital strategy in the public sector.

In the interview, we discussed the option of establishing a parliamentary working group on digitalisation. It was confirmed that they tried; the option has been extensively discussed, but it did not go through. It is unclear why. It was suggested by the interviewee that digitalisation is just too broad. The SDGs are still fairly concrete because of the finite list of goals and common understanding of how 'ordinary people' can contribute by for instance separating their own waste.

It was also mentioned during the interview that it might be more beneficial to introduce a committee, rather than a working group on digitalisation because of the more formal functions you would like to get involved in (e.g. also with regard to initiating laws, etc.). The theme of digitalisation is now placed within several

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196 It is noteworthy, the three Scandinavian countries top the global SDG Index ranking. Denmark is second of 156 in the global rank. The main areas of concern are responsible consumption and production (SDG12), and life below water (SDG14).
        https://s3.amazonaws.com/sustainabledevelopment.report/2018/2018_sdg_index_and_dashboards_report.pdf

197 Denmark has two main strategies addressing digitisation that evolve from two different angles: business innovation policy (The 'Digital Growth Strategy', from January 2018) and public innovation policy ('Digital Strategy for 2016-2020: A Stronger And More Secure Digital Denmark from May 2016). The Ministry of Finance and the Ministry of Industry, Business and Financial Affairs, published the Danish National Strategy for Artificial Intelligence, in March 2019.

198 https://sustainabledevelopment.un.org/memberstates/denmark

committees. The Agency for Digitalisation was mainly set up because Denmark was lagging behind, and digitalisation needed to get some attention, visibility in a government.

Topic

The working group works on the following questions:

1) How do the standing committees and the respective ministries work with the world goals?

2) What can other countries learn from Denmark, and what can Denmark learn from other countries in their work on world goals?

3) How is the work internationally (EU, Nordic Council of Ministers, IPU etc.) with the world goals, and what can Denmark learn from this?

4) What is the progress of the world goals in Denmark and what is the government doing to ensure progress?

5) How do civil society and business work with the world goals, and can the working group support the good examples and the knowledge of them?

6) How can the national focus on working towards the world goals be increased?

7) How does the working group ensure that the Folketing maintains its focus on world goals until 2030?

8) Can work on the world goals be anchored in the Folketing in a more solid form?

The working group has the opportunity to make recommendations to the government and for the future parliamentary work on the world goals of the Parliament. The working group is provisionally functioning until the end of the parliamentary year 2019-20. Before the end of the 2019-2020 parliamentary year, the Finance Committee issues a report about the workgroup's work, and it should be clarified whether the working group should be replaced by a special committee for the work with the world goals.

Members

The parliamentary working group consists of two members from the Finance Committee and, in addition, up to two members from each party. The presidency is made up of one Chair and two vice-Chairs. The Chair of the working group must be either Chair or vice-Chair of the Finance Committee, while one of the vice-Chairs must be a member of the Foreign Affairs Committee and the other vice-Chair a member of the working group. Both electoral unions must be represented in the presidency. The purpose of this design is to ensure coordination between the national and foreign policy objectives of the world objectives and a smooth working process for the secretariat in approving consultation questions etc.

The Finance Committee wants the parties to appoint members so that both national and international targets are embraced. Members are considered as representatives and draftsmen of the world goals and are encouraged to cover key professional committees as a whole. Members are encouraged to engage in the work and participate in the planned activities. The Parliamentary Secretariat provides secretarial assistance to the working group.

Currently,[199] Jens Joel is the Chair of the working group. He is also Chair of the Finance Committee, and Child and Education Mayor. The vice-Chairs are Mette Gierskov and Katarina Ammitzbøl. Furthermore, there is an economic consultant (Birgitte Smith Lange) and a committee consultant (Anders Helmuth Knudsen). The other members of the group are from several different committees and from all parties.

Activities
The working group meets approximately every three weeks for an activity. If the activity is relevant to members outside the organisation-group, they are invited to participate.

The working group will continuously collect input from stakeholders that can be included in joint solutions, including using the 2030 network to gather knowledge that can be included in the committee work. The working group can choose to initiate consultations, expert meetings, analyses, consultations (via the Finance Committee), review material, study trips and company visits and ask questions to ministers (via the Finance Committee) or other countries' parliaments via the ECPRD (European Center for Parliamentary Research and Documentation) on practices in other countries, etc.

The following activities were foreseen between January and July 2019:
1) Consultation involving civil society, Jan / Feb 2019.
2) Consultation with the Minister of Finance on the Government Progress Report on the Action Plan for the implementation of the World Goals, June 2019.
3) Participation in the annual meeting of the United Nations High-Level Political Forum on Sustainable Development (HLPF), July 2019.

More activities can be added continuously at the request of the working group. The Ministry of Finance and the Ministry of Foreign Affairs are informed of the working group and invited to activities where it is considered relevant.

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199 https://www.ft.dk/da/udvalg/parlamentarisk-arbejdsgruppe-om-verdensmaal/medlemsoversigt

RESULTS

On 9 September 2019, the Parliamentary Working Group for the World Goals held an open consultation under the heading "Launching the 2020 edition of Denmark for the Goals". The purpose of the consultation was to promote the widest possible anchoring of the World Goals, throughout Denmark, from Folketing to municipalities. As a result, the consultation focused on the questions:

- How can we engage the many rather than the few in the World Goals and their implementation?
- How can we improve cooperation across Denmark and the many sectors?
- How can we change habits, production and consumption to the common good?

The consultation also constituted the launch of the next season of the information and action campaign, which has the same headline as the consultation: " Denmark for the Goals ". A campaign as in itself is an attempt to answer the above questions, in practice.

The consultation was open to all interested parties, from all over Denmark and all sectors. Be it education and research, business, civil society and political parties. This breadth will also be reflected in the final list of speakers and the final program, which will follow in the near future.

IMPACT

The Working Group on World Goals is not yet evaluated, but according to our interviewee, it certainly has had an impact because of its different functions. On the one hand, the working group is concerned with supporting the Finance and Foreign Affairs Committees with scrutinising the government. Organising the working group it is, really helped to coordinate between the responsibilities of both departmental committees. On the other hand, the working group gives presentations to other committees. Some committees were already working on SDGs, but others were encouraged and inspired to take up the topic because of the working group. Also, other committees sometimes did work on related topics, but never named or connected it to the SDGs. Now there is more awareness of the World Goals. As such, the working group had a function to inform, and advise other committees and help with agenda-setting. With the secretariats of both the parliamentary working group and the 2030-network combined, it will also be easier to hold ministers to account, more formally. This will improve the impact even further.

During the interview, we also reflected on the workings of the Advisory Council SDGs of Germany. They seem to work in a much more thorough and structured way. They produce large reports and have hundreds of indicators they monitor and

report on. In Denmark they try to learn from this; they are setting up collaborations with their statistical organisation. What our interviewee finds particularly interesting, is how the German council gives back something specific to each individual committee.

5   Norway

5.1   Introduction

Norway is a parliamentary constitutional monarchy. The monarch (Harald V) is head of the state. The prime minister (Erna Solberg) is the head of government. Currently (2017-2021) the parliament consists of nine parties. The current form of government is a coalition government, but minority governments also occur. After an election, the King asks the intended prime minister to put together a government. In addition, the king signs the laws that are submitted, but has no political power.

The Norwegian Parliament (Storting) is unicameral and consist of 169 members.

Until 2009 the parliament was bicameral, consisting of the *Odelstinget* and the *Lagstinget*. In 2009 this changed to a unicameral parliament. Despite this change, Parliament wanted to retain what worked well in the bicameral system. The two-stage treatment offers the possibility of reflection and the possibility of correcting errors and shortcomings. It was therefore decided that the laws should still be dealt with in two sessions, at least three days apart, but both times in the plenary rather than in the two sections. Constitutional changes require a two-thirds majority, while furthermore a simple majority is sufficient.

Both parliament and government can submit legislative proposals. The government exercises power in accordance with the laws that parliamentarians form. The parliament controls the government. The courts, with the Supreme Court as highest body, judge every case. They also have a certain control that the legislative and executive powers follow the laws that they themselves have (previously) adopted.[200]

There are different types of committees in Parliament. There are standing committees, special committees, committees of inquiry, and parliamentary groups.

Standing committees
The Norwegian parliament is supported by standing committees, where most changes to government proposals are submitted. The commission is supported by a secretariat, though a small secretariat. Because of this small secretariat, most

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200 https://www.stortinget.no/no/Stortinget-og-demokratiet/stortinget-
    undervisning/ungdomstrinnet/maktfordeling/

research is done within party groups, where they have research service sections (*Utredningsseksjonen*). These research service sections mostly deliver facts and figures on specific questions. There is no current or previous standing committee specifically concerned with digitalisation. The two committees which concern themselves the most with digitalisation are: The Committee for Transport & Communication (their political counterpart is amongst others the Minister of Regional Development and Digitalisation) and the Committee for Administration and Local Government (privacy and e-government issues).

Special Committee
If the parliament considers it necessary, a "special committee" can be set up in exceptional cases to investigate a specific subject or case. There is no current or previous special committee concerned with digitalisation.

Committee of Inquiry
The Storting can set up an investigation committee to clarify or assess a previous factual state of affairs. The terms of reference must allow an assessment of responsibilities to the extent that such assistance is required by the Storting. The Deposit determines the mandate of the committee and the specific procedures for its activities. There is no current or previous committee of inquiry concerned with digitalisation.

Parliamentary Groups
In addition, Norway has several Storting groups where members of the parliament join a group. These groups are not connected to committees or ministries. There is one on Tibet for example. Members of the parliament can form a group and notify the presidency of the parliament. A relevant example for our study is the Stortinget Teknogruppe. This group differs slightly from the other groups, since it has its own support staff from the Norwegian Board of Technology, the sister organisation of the Rathenau Instituut.

Governmental initiatives
There are a variety of initiatives within the government concerning digitalisation. Below we will summarize relevant initiatives. In general, the parliament leans on the ministries for generating knowledge on issues such as digitalisation.

Minister of Digitalisation
In 2019, Norway has appointed for the first time a minister of Digitalisation (Nikolai Astrup). In the beginning of this year, there was a reshuffle of ministries. Nowadays there is a Minister of Regional Development and Digitalisation (Linda Hofstad Helleland). She does not have her own ministry, but reports to the Ministry of Local

Government and Modernisation. She is responsible for IT policy, electronic communications and privacy protection.

Strategy for Artificial Intelligence (2019)

The government will develop a strategy for artificial intelligence. The strategy will be completed in 2019. This work will be done within the Ministry of Local Government and Modernisation.

New national strategy for cyber security (2019)

The new strategy is Norway's fourth cyber security strategy, and is intended to address the challenges that arise in conjunction with the rapid and far-reaching digitalisation of Norwegian society.[201] The developments in relation to previous strategies are based on the need to reinforce public-private, civilian-military and international cooperation.

The list of measures, as part of the strategy, contain measures with a budget of around 1,6 billion NOK. The strategy also contains ten basic advices for all companies in Norway to follow to raise the cybersecurity level across the nation. In preparing the strategy, particular emphasis has been put on applying an open and inclusive process so as to involve stakeholders from the public and private sector alike.[202]

Temporary Committee of Digital Vulnerabilities in Society (2015)

The work of this committee was executed by the Ministry of Justice and Public Security. Industrialized countries are in the midst of a transition. Analogous tools and infrastructures that where totally dominant a handful of decades ago, are rapidly - and to some extent unplanned and uncoordinated - being replaced with digital solutions. The fast development of ICT technology also leads to rapid change and renewal of existing digital solutions (movement of functionality from local installations into cloud-installations is a current example of this).

The change from an analogue to a digital world present new challenges to developed countries. These challenges range from new types of crimes and new arenas for terrorism, to new classes of accidents with new sets of consequences. The constant flux of the digital world means that the classes of crime, terrorism, accidents and consequences also are a subject to constant change.

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201 https://www.regjeringen.no/contentassets/c57a0733652f47688294934ffd93fc53/list-of-measures--national-cyber-security-strategy-for-norway.pdf

202 https://www.enisa.europa.eu/news/member-states/new-national-strategy-for-cybersecurity-published-by-norway

On the basis of this development, the committee concluded that there is a need for an assessment of the society's digital vulnerabilities in order to further improve and coordinate emergency preparedness on a sound professional basis.[203]

5.2   Parliaments' Technogroup

ORIGIN & POSITIONING

The Norwegian parliament has a *Stortinget Teknogruppe* (parliaments' Technogroup). This group was initiated in 2015 by a group of six technology-interested MPs. The group wants to be the 'technology radar' of the Norwegian parliament and aims to analyse technology trends timely in order to have a fruitful discussion within the parliament. The form of this group is permanent and quite informal. In comparison to the caucuses in American Congress, this group not is based on a lobby interest regarding new legislation for instance. Instead, it is based on a common interest of the six parliamentarians from different political parties to improve the debate on technology in Stortinget. The Norwegian Board of Technology (NBT) is the group's secretariat and has an important role by informing the group with briefs prior to their meetings.

This group aims to analyse technology trends and timely discuss the impact of emerging technologies in the parliament. Another ambition the group has, is to work across committees as the impact of technology is cross-disciplinary. Every time they organise a session, all the MPs are invited by the Chair of the Teknogruppe through the parliamentary agenda. At the same time NBT also maps which MPs in Storting might be especially interested in the subject and they are then again personally invited.

SET-UP & APPROACH

The Teknogruppe consists of 6 MPs from 5 parties (8 parties in parliament). The NBT is its secretary. The NBT together with the Teknogruppe decides on the topic for the meetings. The NBT provides a brief of two pages for each meeting. The brief highlights the developments of the technology, the opportunities for Norway, the state of (policy) affairs and relevant societal, judicial or ethical questions. The NBT always offers insights into the short term relevance and the long term impact.

NBT sets up the meeting and decides which experts to invite (usually two) and facilitates the meeting. There are about five meetings a year which each last for 75 minutes, of which 45 minutes are reserved for discussion. Attendees of the

203 https://www.regjeringen.no/en/dep/jd/organisation/councils-and-committees/innstillinger/innstillinger-fra-utvalg/innstillinger-levert-i-2015/Committee-of-Digital-Vulnerabilities-in-Society/id764196/

meetings are interested MPs from different committees. The average number of MPs attending the meetings is 10 to 15, with outliers of 20 MPs (next to the 6 members of the Teknogruppe). Most MPs are from the committees of Finance and of Justice, but it depends on the topic. There have been MPs attending from the Committee on Health, Trade & Industry and Education & Skills. There is no budget available for the group. The meetings are usually not open to public in order to make it a 'safe' place for MPs to ask everything they would like to ask. No minutes are made. The Teknogruppe encourages the viewpoint 'politics out, policy in' for their meetings.

RESULTS

The input for the meetings is a collaborative decision by the Teknogruppe and the NBT. The NBT aims to help the parliamentarians to raise the right questions. Examples of discussed themes are: 5G, autonomous cars, live long learning, solar power & digitalisation, blockchain, gene-editing and facial recognition.

IMPACT

It is always hard to tell what is the exact impact of these informal meetings on digitalisation issues. Sometimes in political debates, MPs refer to the meetings and/or the briefs, but this is not systematically monitored. The 6 MPs of the Teknogruppe use their membership to profile themselves with parliament as technology experts. Lately there also has been some competition for the position of the Chair. The one meeting that was open for public, attracted 80-100 attendees (like journalists and representatives from companies like Facebook). The topic of this open meeting was on the manipulation of elections.

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