

CAPCIT: The Advisory Board of the Parliament of Catalonia for Science and Technology

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Resum. A tot el món, els parlaments i altres òrgans legislatius representen societats en les quals les tecnologies de la informació i els coneixements científics avancen a un ritme frenètic. No obstant això, la major part dels legisladors no tenen els coneixements o la formació necessària per a comprendre o afrontar les conseqüències de la revolució tecnològica i científica. Seguint la tendència d'assessorament científic i tecnològic als parlaments (PTA) d'Estats Units i d'Europa en les darreres dues dècades, el 2008 es va crear el Consell Assessor del Parlament sobre Ciència i Tecnologia (CAPCIT) al Parlament de Catalunya. Tot i la curta història d'aquesta institució, el CAPCIT representa el primer i més seriós intent a Espanya de reunir les principals fonts d'informació científica i tecnològica en un fòrum comú al servei de la formulació de polítiques.

Paraules clau: assessorament científic i tecnològic als parlaments (PTA) · Oficina d'Assessorament Tecnològic (OTA) · Xarxa Europea d'Assessorament Tecnològic als Parlaments (EPTA) · Consell Assessor del Parlament sobre Ciència i Tecnologia (CAPCIT)

Summary. Throughout the world, parliaments and other legislative bodies represent societies in which information technologies and scientific knowledge are advancing at a frantic pace. Yet, most legislators lack the knowledge or training required to understand and deal with the full implications of the technological and scientific revolution. Following the trend of Parliamentary Technology Assessment (PTA) in the United States and Europe over the past two decades, the Advisory Board of the Parliament of Catalonia for Science and Technology (CAPCIT) was established in 2008. Despite the institution's short history, CAPCIT represents the first and most serious attempt in Spain of bringing together the main scientific and technological sources in a common forum at the service of policy-making.

Keywords: Parliamentary Technology Assessment (PTA) · Office of Technology Assessment (OTA) · European Parliamentary Technology Assessment (EPTA) · Advisory Board of the Parliament of Catalonia for Science and Technology (CAPCIT)

Introduction and historical notes

As in many territories around Europe, the parliamentary tradition of Catalonia traces back to medieval times. The Catalan quest for democracy also has several similarities with that of the region's European neighbours due to the coincidence of time and several ideological parallelisms. In the 20th century, during the Second Spanish Republic (1931–1939), a democratically elected Parliament of Catalonia was established in 1932. However, only its first few years were peaceful and it was abolished in 1938. After that, Franco dictatorship (1939–1975) abrogated most of the Catalan legal order. The Parliament of Catalonia was re-established in 1980 and combines modernity with tradition, youth with expertise.

Today, the Parliament of Catalonia is confronted with a multitude of complex economic and social problems and its deci-

sions must consider the needs of future generations. Throughout the world, parliaments and other legislative bodies represent societies in which information technologies and scientific knowledge are advancing at a frantic pace. Yet, most legislators lack the knowledge or training required to understand and deal with the full implications of the technological and scientific revolution. Moreover, their respective institutions continue to search for the best way to support scientific and technical innovations.

Over the past few decades, attempts have been made to tackle and anticipate such challenges. In 1972, the Congress of the United States of America created the Office of Technology Assessment (OTA). The Congress considered that agencies from the Executive Branch were not designed to provide it with adequate information on science and technology and found "essential that, to the fullest extent possible, the consequences of technological applications be anticipated, understood, and considered in determination of public policy on existing and emerging national problems." Therefore, the Congress equipped itself with a new office in charge of "se-

curing competent, unbiased information concerning the physical, biological, economic, social, and political effects of such applications" [1]. In 1995, the OTA was abolished, but the idea of a TA survived. In 2008, the Government Accountability Office (GAO) of the United States Congress incorporated a new function through a TA unit, taking on the former duties of OTA [2].

In subsequent decades, a few European states instituted a unit or office based on the OTA. For example, in 1986, the Netherlands created the Organization for Technology Assessment (NOTA), later renamed the Rathenau Institute; in 1989, the UK Parliament's Parliamentary Office of Science and Technology (POST) was established [3]. In 1990, the European Parliamentary Technology Assessment (EPTA) was founded as a network for the exchange of ideas and experiences. This internationalization has helped to define TA as a process for studying and evaluating new technologies by providing information about their possible unintended negative effects, costs, and ethical and societal implications. Concretely, Parliamentary Technology Assessment (PTA) is a kind of TA oriented to inform members of Parliament [4].

Following that trend, in the 8th legislative term (2006–2010) of the Catalan Parliament, the Advisory Board of the Parliament of Catalonia for Science and Technology (CAPCIT, its Catalan abbreviation) was formally established, in the decision of the Parliamentary Bureau (also referred as the Board of the Parliament of Catalonia) of 15 July 2008. The first meeting of CAPCIT was held on 10 November 2008, during which it ratified its Rules of Organisation, as agreed by the Parliamentary Bureau decisions of 15 July 2008 and 7 October 2008 [5]. CAPCIT is the first scientific and technical advisory body to be set up directly by the Parliament of Catalonia.

However, it was not without precedent and its origins can be traced to an autonomous unit created by the Catalan Government in 1999, the Advisory Commission on Science and Technology (CACIT), which essentially functioned as unit of the Executive branch. CACIT was closed in 2004 but during its short life it established a link with the Parliament of Catalonia. On 29 April 2003 the Parliament of Catalonia approved a motion asking the Government to change the decree concerning CACIT in order to add a new function to the unit: the provision of information and consultation to the Parliament in matters related to science and technology [6].

On 1 December 2003, a letter from the Speaker of the Parliament of Catalonia requested that CACIT be registered as member of the European Parliamentary Technology Assessment (EPTA), taking into account the motion of 29 April 2003. Although the request was granted, membership was not fully completed until CAPCIT was founded, which required another formal application to the EPTA in a letter dated 14 October 2009. Finally, full membership rights were granted to CAPCIT at the EPTA Council meeting of 2 November 2009, held in London. Currently, the Parliament of Catalonia is the only parliament in Spain to have a scientific and technical advisory body. Indeed, there is not a single TA body attached to the Spanish Parliament nor to any of the other parliaments of the autonomous regions of the country.

CAPCIT's mission

CAPCIT aims to coordinate all science- and technology-related information and advice required by the Parliament of Catalonia. It provides a forum in which to present members of the Parliament of Catalonia with the results and findings of the TA tasks carried out by several Catalan scientific and technical institutions. Although CAPCIT has not yet undertaken any kind of public debate or participation, this is a possibility for the future. Nonetheless, CAPCIT is not a closed organization. Rather, it seeks to establish long-term relationships through a 'pairing scheme' with scientific enterprises and research centres that allows members of Parliament (MPs) to be kept abreast of issues related to the scientific community.

CAPCIT is not a 'watch-dog' agency. Nor is it directly responsible for scientific policy, which is the domain of the Commission of Education and Universities. Instead, CAPCIT focuses on TA and the relationship between the Catalan Parliament and science conducted in Catalonia. The working fields of CAPCIT can be summarized as follows: (a) science, in the broadest sense; (b) technology, the Internet, and communications; (c) bioethics and health; (d) the environment and energy; (e) the dissemination of information and the provision of education in the above spheres [7]. Thus, the goals of CAPCIT are [8]:

- Contributing to the improvement of the Catalan Parliament's scientific and technical knowledge and disseminating this knowledge throughout Catalan society.
- Channelling participation from the main scientific and technical institutions in Catalonia when it comes to shaping the will of the Parliament in these spheres.
- Cooperating with institutions, scientific and technological bodies, professional associations, universities, and other organizations and institutes that operate in the fields of science and technology as well as coordinating activities with them.
- Promoting shared responsibility with regard to public science and technology policies.

The principle for all of the actions undertaken by CAPCIT is the fostering of a diversity of opinions and encouraging awareness of scientific and technical alternatives in order to ensure that any consultation provided is neutral, objective, and independent.

Composition

CAPCIT is a mixed body whose size depends on the number of parliamentary groups present in the Catalan Parliament and the scientific and technical institutions of Catalonia that are invited to send representatives. In the current, 10th legislative term, CAPCIT is composed of 20 members and a secretary [9]. Ten of those members are members of the Parliament of Catalonia, including the Speaker-President of the Parliament, who also holds the presidency of CAPCIT; seven MPs were

appointed from each of the seven parliamentary groups represented in the Parliament of Catalonia and two MPs are from the Parliamentary Bureau.

The remaining ten members are representatives from the main scientific and technical institutions of Catalonia: three from the Institute for Catalan Studies (IEC), two from the Catalan Foundation for Research and Innovation (FCRI); one from the Catalan Council for Scientific Communication (C4); three from the Catalan Public University Association (ACUP), and one from the private universities. The IEC is both the scientific academy of Catalonia and the academy for the Catalan language. The goal of the FCRI is to support and promote research and innovation. C4 is devoted to scientific dissemination and the ACUP serves as the principal voice of the public universities of Catalonia.

The secretary of CAPCIT is one of the lawyers of the Parliament's Legal Service. He or she has speaking but not voting rights and must draw up the minutes of agreements and reports. CAPCIT does not have its own staff. Instead, preparations for meetings as well as other administrative tasks and services are carried out by officials from the Parliament of Catalonia. Once CAPCIT decides that one of the scientific and technical institutions is responsible for drafting a report, that institution draws upon its own staff and resources.

Legal nature

PTA institutions are typically divided into three categories differing in their forms of institutionalization: the parliamentary committee model, in which a specific parliamentary political structure performs the duties of the PTA office; the parliamentary office model, in which a unit within the parliamentary structure leads the PTA; and the independent institute model, in which an office operates distinct from and external to Parliament [10]. CAPCIT follows the parliamentary committee model, although it is not formally a committee [11]. Also, it should be noted that this model does not require the establishment of a 'committee' but instead allows for a political structure within Parliament. While CAPCIT does not directly provide TA it does commission other bodies, usually the scientific and technical institutions from which its members are drawn, to create reports and provide advice. It is a body of the Parliament of Catalonia but its nature, structure, and duties distinguish it from other bodies of the Parliament of Catalonia.

The Parliament of Catalonia meets in a plenary session and in several committees, which, as noted above, do not include CAPCIT. MPs also have other forms of institutionalized meetings. In modern parliaments, MPs from more than one parliamentary group may collaborate within a structure other than the plenary session or the committees, either for one-off matters or for issues of a more ongoing nature. In parliamentary law, these working platforms or informal groupings are referred to as intergroups; they are also called cross-party and all-party groups. In the Parliament of Catalonia, intergroups were not subject to Parliamentary Rules until 2005. Since then, they have been regulated through Article 62 of the Rules, which defines an intergroup as a mixed parliamentary body in that it comprises not only MPs but

also technicians, specialists, and members of civic organizations.

In the Parliament of Catalonia, an intergroup is formally created by the Parliamentary Presiding Board, unlike in the European Parliament, for example, in which an intergroup is created by the MPs by virtue of the right of association. The duties of intergroups are perhaps best characterized as those of promotion, which underlines the fact that their activities are of a fostering nature and as such are not result-oriented. Promotion encompasses research (studies), dissemination (raising awareness), and the establishment of external contacts (solidarity and friendship). However, in the Parliament of Catalonia intergroups are not allowed to substantiate or process parliamentary initiatives, or to present them in order for the parliamentary body competent in such matters to do so; rather, an intergroup usually reaches a consensus over texts that parliamentary groups then present to the relevant committee or to the plenary session. Therefore, intergroups are not parliamentary decision-making bodies and the position of the Catalan chamber cannot be derived from the agreements they reach. In the 10th legislative term, there are four intergroups: (a) to promote cycling, (b) to provide support for gypsies, (c) to support efforts for peace and freedom in the Sahara, and (d) to encourage efforts at population, development, and reproductive health.

CAPCIT is similar in nature to the intergroups. It is a mixed body since, as noted above, it consists not only of MPs but also of representatives of Catalonia's foremost science and technology institutions. However, unlike the intergroups, CAPCIT is chaired by the President of the Parliament (Speaker), with two additional members from the Parliamentary Presiding Board, in recognition of the importance attached by the chamber to CAPCIT's responsibilities. CAPCIT, as happens with intergroups, is unable to process parliamentary initiatives. CAPCIT does encompass improving the scientific and technological knowledge of the Parliament, cooperating and collaborating with the foremost science and technology institutions, and promoting co-responsibility in public science and technology policies. Thus, CAPCIT could be seen as a sort of intergroup, albeit with greater institutional presence because of the involvement of the Presiding Board and thereby of the chamber's governing body.

Functioning

CAPCIT meets at least twice a year: at the start of each session of Parliament (September and mid-January) (Table 1) and in informal meetings and working sessions as needed.

CAPCIT is charged with decision-making regarding its working plan and the issues that require the preparation of TA reports. Thus not only politicians but also members of the scientific and technical institutions are involved in these deliberations from the outset, choosing the issues and determining the suitability of devoting time and resources to specific topics. One of the strengths of CAPCIT is that the various institutions can express their opinions on the topics to be addressed; however, working issues and decision-making must be conducted from a political standpoint to a certain degree. Furthermore,

Table 1. CAPCIT's formal meetings between 2006 and 2013

Legislative term	CAPCIT session
8th (2006–2010)	10 November 2008
	23 February 2009
	15 June 2009
	23 November 2009
	21 June 2010
9th (2010–2012)	11 April 2011
	20 June 2011
	12 December 2011
	02 July 2012
10th (2012–)	15 April 2013

Source: Own elaboration.

the Parliamentary Bureau (Board of the Parliament of Catalonia) and its committees can request that CAPCIT work on a particular topic and individual MPs can formulate suggestions via their parliamentary groups. Although requests to CAPCIT for reports usually come from parliamentary groups or CAPCIT's member scientific institutions, generally a consensus, or at least the consent of different groups, is required to finally adopt a decision to ask for a TA report.

As in other parliaments, Catalan political groups sometimes use only the scientific information that is in accordance with their ideals. This applies to parties on the left (e.g., regarding the environment) and on the right (e.g., in efforts to avoid investigations of the pharmaceutical industry). Moreover, political parties are reluctant to consider scientific reports in areas involving their 'core' political ideology. In some debates, the evidence is respected and political positions seek to accommodate the scientific evidence (for example, in debates on certain health-related issues). But often times the objectivity of the evidence, reports, and scientific information is questioned and the discussions become rather 'fact free politics' (for example, the debate on unconventional gas).

Finally, though, CAPCIT is aware of the different rhythms of the political and scientific worlds. There is no synchronization between the political and the scientific agenda. Thus, it is sometimes not possible to complete a scientific report on a matter that needs a political response in a short period of time. Nevertheless, there are cases in which parliamentary debates have an impact on the scientific agenda and in which scientists require that Parliament reach a decision. Indeed, in 2008 there was synchronicity with the topic of GMOs. Specifically, a popular initiative was presented in Parliament, with enough time to allow a TA report that in turn was used by the political groups in their internal debates and cited in the final debate. More often, however, TA reports are not related to a concrete parliamentary initiative.

Once CAPCIT decides that it is necessary to address a particular topic or the issue has been put forward to the body by

the Board of the Parliament of Catalonia, or any of the parliamentary committees, a decision needs to be made as to who shall be responsible for drawing up the report, either (a) one of the scientific and technical institutions represented in CAPCIT or (b) another scientific and technical institution, with proceedings initiated to appoint that institution. This latter option is not generally used.

Each of the scientific and technical institutions represented by CAPCIT has its own analysts and scientific directors, who are in charge of preparing the reports, and can thereby count on the availability of in-house expertise and economic resources. The scientific and technical institution committed to writing a TA report decides the on methodology used to elaborate the report. The reports presented to CAPCIT may or may not include recommendations. The TA method currently used by CAPCIT's scientific and technical institutions is the classical approach of expert-based policy analysis to evaluate the consequences of scientific and technological advances and thus to provide the most neutral support for decision making. No quality controls have been established inside the institution; rather, each institution produces reports according to its own standards. Although in this respect harmonization may be beneficial, the reports presented to CAPCIT are not of a binding nature and thus do not demand a specific format. Since its inception, CAPCIT has worked on areas including GMOs, human papillomaviruses, nanotechnology, nuclear power after the Fukushima event, neuroscience and personalised medicine.

Concluding remarks

The impact of CAPCIT and its role in politics are still quite limited due to the institution's short history. However, before the creation of CAPCIT, Catalan MPs had little contact with scientific reports and evidence, instead they pursued matters according to their interests. CAPCIT's merit lies in setting the basis for formalized TA practices. CAPCIT itself is a forum that can be seen as a way to bring together the political and scientific worlds. Equally important as the information and scientific reports it provides is the opportunity for MPs and scientists to meet and thus to personally and directly present their ideas and visions. CAPCIT can foster mutual trust between scientific and technical institutions and the Parliament of Catalonia. It also offers a channel of communication for scientific and technical entities, other organizations, and society at large [12]. CAPCIT represents the first and most serious attempt in Spain of bringing together the main scientific and technological sources in a common forum at the service of policy-making.

Notes and References

Notes

1. The Office of Technology Assessment Act of 1972, Public Law 92-484, 92nd Congress, H.R. 10243, 13 October 1972. See: http://govinfo.library.unt.edu/ota/Ota_5/DATA/1972/9604.PDF

2. See: Vig NJ, Paschen H (2000) *Parliaments and Technology: The Development of Technology Assessment in Europe*. State University of NY Press, New York
3. A standard definition of Technology Assessment (TA) can be found in: Vig NJ, Paschen H (2000) *Parliaments and Technology: The Development of Technology Assessment in Europe*. State University of NY Press, New York, p. 3
4. In the US Senate report accompanying the proposed bill for the legislative branch fiscal year 2008 appropriation, the Senate Committee on Appropriations recommended the establishment of a permanent technology assessment function within GAO. See: http://www.gao.gov/technology_assessment
5. See: Official Gazette of the Parliament of Catalonia (*Butlletí Oficial del Parlament de Catalunya*) number 357 (24 November 2008), p. 57. CAPCIT Rules of Organisation and first composition can be found in that Gazette.
6. Point (f) of the Motion number 240 of the 6th Legislative terms says: The Parliament of Catalonia urges the Government to endow the Advisory Commission on Science and Technology (CACIT), created by the Decree of the Government 49/1999, of the 23 of February, with new functions of scientific and technological assessment of the Parliament of Catalonia, in the line of similar offices of countries of our surroundings, with the paramount function of advising the Parliament and the Government so they can establish the strategic lines of research, technological development and in relation with the creation of industries of the knowledge and of the learning, optimising the public resources and ensuring the participation of enterprises.
7. See Article 4 of the CAPCIT Rules of Organisation.
8. See Article 5 of the CAPCIT Rules of Organisation.
9. See: Decision of Parliamentary Bureau of 12 February 2013. *Butlletí Oficial del Parlament de Catalunya* 357 (24 November 2008), p. 27
10. Science and Technology Options Assessment (2011) *Technopolis Report: Technology Across Borders. Exploring perspectives for a pan-European Parliamentary Technology Assessment* [[http://www.europarl.europa.eu/RegData/etudes/etudes/join/2011/482684/IPOL-JOIN_ET\(2011\)482684_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/join/2011/482684/IPOL-JOIN_ET(2011)482684_EN.pdf)]
11. The so called 'Technopolis Report' places CAPCIT in the Parliamentary Office model. But the Parliament of Catalonia has not its own fully equipped office for TA studies. It is necessary to insist that CAPCIT does not perform PTA directly, but commissions other bodies, usually scientific and technical institutions present in its composition, to make reports and advice. See: page 13 of *TECHNOLOGY ACROSS BORDERS - Exploring perspectives for pan-European Parliamentary Technology Assessment* [10]
12. See Article 3 of the CAPCIT Rules of Organisation.