

TRANSPARENCY AND NUCLEAR LAW: AN INSTRUMENTAL PERSPECTIVE

Anoeska Buijze, Tijn Kortmann, Caroline Verwijs,¹

"Abstract"

Transparency is often appreciated for its contribution to safety. On the other hand, transparency can pose a risk to security. But transparency is not a monolithic concept: many different types of transparency exist, each with their own benefits and downsides. The challenge then is to identify targeted transparency measures that contribute to safety, while posing minimal risks to security.

1. Introduction

1.1. Transparency after Fukushima

In 2011 an earthquake at Sendai caused a tsunami striking the Japanese coast. This caused extensive damage to electricity networks, which eventually caused the cooling system of the Dai-ichi Nuclear Power Plants to fail and led to a meltdown in three of the six reactors. "The accident shook the public's faith in nuclear energy," observed the Japanese evaluation report that was drafted after the incident, and it did not take long before calls for improved safety measures were heard.²

The evaluation of the accident showed that Japan had been unprepared to deal with the combined consequences of the earthquake and the tsunami, but also revealed a lack of compliance with safety standards. In addition, the communication towards the general public in the aftermath of the event could have been better. The evaluation report especially refers to the quality of the information: the contents should be easier to understand. In addition, the Japanese observe that although communication is initially a one-way street, two-way communication must be established later to ensure that the information needs

¹ Anoeska Buijze is a postdoctoral researcher at the Utrecht University Centre for Water, Oceans and Sustainability. Tijn Kortmann is *of counsel* at the law firm Stibbe Amsterdam and honorary senior lecturer at Utrecht University. Caroline Verwijs – van Fraassen is manager Legal, regulatory affairs and compliance officer at NV EPZ, the operator of the sole nuclear power plant in the Netherlands

² <http://www.guardian.co.uk/world/2011/may/11/japan-nuclear-power-expansion-plans-abandoned>

of the population are actually met.³ This suggests that people have a specific need for certain information and pleads for a nuanced approach to the scope of transparency obligations: communicating useless information has little benefit, is a burden on the informant, and might – as we will discuss later – create security risks. Recommendation 19 of the evaluation report encouraged the Japanese government to achieve the following:⁴

Enhancement of communication relevant to the accident

Communication to residents in the surrounding area was difficult because communication tools were damaged by the large-scale earthquake. The subsequent information to residents in the surrounding area and local governments was not always provided in a timely manner. The impact of radioactive materials on health and the radiological protection guidelines of the ICRP, which are the most important information for residents in the surrounding area and others, were not sufficiently explained. Japan focused mainly on making accurate facts publicly available to its citizens and has not sufficiently presented future outlooks on risk factors, which sometimes gave rise to concerns about future prospects. Reflecting on the above issues, we will reinforce the adequate provision of information on the accident status and response, along with appropriate explanations of the effects of radiation to the residents in the vicinity. Also, we will keep in mind having the future outlook on risk factors included in the information delivered while incidents are still ongoing.

There was praise for Japan as well: “The Japanese Government, nuclear regulators and operators have been extremely open in sharing information and answering the many questions of the mission to assist the world in learning lessons to improve nuclear safety.”⁵ The report emphasizes several times that the openness about the incident will allow the international community to learn from the accident in Japan, and to prevent similar incidents from occurring in the future. Thus, transparency is important in two respects: it allows the nuclear community to learn from mistakes, and will help the general public in dealing with the consequences of a nuclear accident. In addition, transparency is thought to promote norm compliance, and might increase the observance of safety standards.

In Europe, the accident in Fukushima prompted a strong legislative response. The Commission issued a draft proposal to amend Directive 2009/71/Euratom establishing a Community framework for the nuclear safety of nuclear installations. Transparency is a central element in the amended Directive.⁶ Under ‘Goals and objectives of the proposal’ the Commission indicates that one of the purposes of the amended Directive is ‘enhancing transparency on nuclear safety matters.’ It is assumed that transparency will lead to better compliance with substantive safety standards.⁷ In addition, information-sharing and peer reviews are thought to increase safety. “The exchange of information and peer-reviews are an essential element to ensure the effective and continuous implementation of any safety regime.”⁸

³ Report of the Japanese government to the IAEA Ministerial Conference on Nuclear Safety – The Accident at TEPCO’s Fukushima Nuclear Power Stations, 2011, p. IX-1.

⁴ Idem, p. XII-10.

⁵ IAEA International Fact Finding Expert Mission of the Fukushima Dai-Ichi NPP Accident Following the Great East Japan Earthquake and Tsunami, Tokyo 2011, p. 3.

⁶ Council Directive 2014/87/EURATOM of 8 July 2014, amending Directive 2009/71/EURATOM establishing a Community framework for the nuclear safety of nuclear installations.

⁷ COM(2013) 343 final, p. 4.

⁸ COM(2013) 343 final, p. 7.

When discussing transparency, the Commission argues that:⁹

The existing provisions of Article 8 of the Nuclear Safety Directive are limited to generic requirements on public information. Moreover, this Article does not impose any obligation on the license holder, who has the prime responsibility for nuclear safety. To fill these gaps, in the proposed amendment, the existing provisions are extended and specified. Thus, both competent regulatory authority and the license holder are required to develop a transparency strategy, which covers information provision under normal operating conditions of nuclear installations as well as all communication in case of accident or abnormal event conditions. The role of the public is fully acknowledged through the requirement that it effectively participates in the licensing process of nuclear installations. Recently organized exchanges with experts in the field have confirmed that the public has a very important role to play by being involved effectively in the decision-making procedures and that their view should be considered, taking into account the provisions of the Aarhus Convention.

In practice, the new transparency obligations are broadly defined, and give little guidance on what is required. Article 6 is amended and includes transparency obligations imposed on the operator towards the regulatory authority. More notable are the changes to article 8, on transparency, where the amended Directive reads as follows:

Article 8

1. Member States shall ensure that up to date and timely information in relation to nuclear safety of nuclear installations and related risks is made available to workers and the general public, with specific consideration to those living in the vicinity of a nuclear installation.

The obligation established in the first subparagraph includes ensuring that the competent regulatory authority and the license holders, within their fields of responsibility, develop, publish an implement a transparency strategy covering, inter alia, information on normal operating conditions of nuclear installations, non-mandatory consultation activities with the workers and the general public and communication in case of abnormal events and accidents.

2. Information shall be made available to the public in accordance with applicable Union and national legislation and international obligations, provided that this does not jeopardize other overriding interests, such as security, recognized in national legislation or international obligations.

3. Member States shall ensure that the public shall be given early and effective opportunities to participate in the licensing process of nuclear installations, in accordance with relevant Union and national legislation and international obligations.

Chapter 2 of the Directive introduces a peer review procedure, which of course requires transparency towards the reviewers.

The accident in Fukushima thus inspired an increased interest in transparency. But how transparency can increase safety remains unclear. The recommendations in the Japanese evaluation report are clear: people should get easier to comprehend information in the aftermath of an incident, so that they can better assess

⁹ COM(2013) 343 final, p. 9.

the situation for themselves, and take appropriate measures. Transparency in the wake of the accident provided learning opportunities that can reduce the risk of future accidents. The EU directive goes further. It introduces the idea that operators should create a plan to communicate directly with citizens, both under normal operating conditions and when an incident occurs. This seems to be justified with the argument that the operator has the primary responsibility for the safety of a plant.¹⁰ However, the Directive does not clarify the exact purpose of the communication plans or their added value when compared to the communication plan of the regulatory authority. The Directive also emphasizes the idea that transparency will lead to better compliance with safety regulations, and will therefore reduce the risk of new accidents. Finally, transparency is important because the public must be allowed to participate in the licensing process, as required under Aarhus. One walks away from the Directive with the feeling the Commission has embraced transparency as a panacea for safety problems in the nuclear industry.

The call for transparency that followed the incidents in Fukushima is understandable, but transparency has downsides as well. There is a tension between transparency and security: the availability of information to the general public carries an intrinsic risk of this information being abused. Once information is out there, it is impossible to control its use, regardless of how noble one's intentions were when releasing it. Access to information legislation tends to make allowances for this, and so does the amended nuclear safety Directive. Article 8(2) says information must be made available as long as this does not jeopardize, *inter alia*, security, but gives no explicit guidance on whether and how these interests must be balanced.¹¹ In this contribution we unravel the tension between transparency, safety and security, and begin to resolve it. First, we refine the argument that transparency contributes to safety and at the same time poses a risk to security. We argue that *certain kinds* of transparency contribute to safety, and *certain kinds* of transparency pose a risk to security. Second, we will go into greater detail on the importance of transparency for improving safety and the nature of the risk posed to security to be able to balance the interests better against each other and to come up with compromises that do justice to both these goals.

1.2. The importance of differentiating transparency obligations

Transparency is an elusive concept. In public law, it refers to the availability, accessibility, and comprehensibility of government-held information. This leaves many questions unanswered: what information should be available, to whom, when, should public authorities provide it of their own accord or only when people request it, and is it acceptable to make exceptions to the principle that information should be available to the public? In EU law, the principle of transparency applies to a broad range of subjects: from granting access upon request to documents held by EU institutions to the general public, to not changing the terms of a procurement contract after it has been concluded. An extensive analysis of these obligations in EU law has shown that both the Union's administrative authorities and the courts apply transparency obligations in an instrumental manner: the principle of transparency is broad, and requires further interpretation. In practice, EU requires only those obligations that contribute to the realization of legally recognized goals to be observed.¹²

Transparency is often lauded for its beneficial effects. Nuclear safety is only one item on a long list of commendable purposes that transparency is supposed to help realize: transparency promotes good governance, democracy, access to education and foreign investment, and even helps to prevent hunger.

¹⁰ COM(2013) 343 final, p. 9.

¹¹ On the balancing exercise performed by various courts faced with the dilemma between transparency and security see U. Feldmann, "The scope of transparency, Reflections on German, Canadian and US Law on the Basis of Case Law," Nuclear Intra Jura Congress 2009.

¹² A. Buijze, *The Principle of Transparency in EU Law*, Utrecht University, Utrecht 2013.

The evidence for the positive consequences ranges from theoretical to anecdotal to empirical, and its excellent reputation appears to be mostly deserved. However, it does raise the question of how transparency can have such a wide variety of positive effects. We distinguish two main mechanisms through which transparency achieves those effects. First, transparency helps its targets to make better decisions. Informed decisions have a better chance of having the consequences the decision-maker was expecting to achieve. This holds true in a large variety of contexts, ranging from democratic decision-making, where an informed public is of the essence, to economic decision-making, where informed parties will be able to get a better deal, to decision-making in the personal sphere, where the available information will impact educational, housing and health care choices people make. In that vein, the European Court of Human Rights has ruled that article 2 ECHR includes a duty for public authorities to inform people about immediate dangers to their life.¹³ This last observation is mirrored in the conversations that took place in the aftermath of Fukushima: one of the points of criticism with regard to the communication towards the general public was that the official briefings focused too much on technical details about the accident and gave too little information on what citizens should actually keep in mind for evacuation.¹⁴

Second, transparency allows outsiders to look into an organization and the way it is organized. When they see what is going on, they can then proceed to exert influence. Hence, transparency is a necessary – though not a sufficient – condition for both participation of the public and accountability of actors. Like transparency, accountability and participation can be introduced for several reasons. It is possible to distinguish two main lines of thinking, dependent on who benefits from accountability and participation. First, it is possible that they aim to empower outsiders. They can ensure that their interests are taken into account, or that the observed party complies with rules that have been previously agreed upon. On the other hand, participation and accountability can also be beneficial to the observed party itself: it can profit from the input provided by outsiders to improve the quality of its decisions. The idea is even more prominent with regard to accountability: by having its mistakes exposed and evaluated, the accountable party has the opportunity to learn and improve. We see both lines of thought in the debate that followed Fukushima. The nuclear industry itself profits from transparency because it helps “to find facts and identify initial lessons to be learned from the accident at TEPCO’s Fukushima Dai-ichi and promulgate this information across the world nuclear community.”¹⁵ That participation and accountability also protect outsiders’ interests is clearest in the EU’s references to the Aarhus doctrine, where participation and accountability are seen as tools to allow citizens to affect public decision-making.

To sum up: the positive effects attributed to transparency are brought about by two different mechanisms. Informed decisions are better decisions, and therefore transparency allows its targets to improve nearly all areas of their lives. In addition, transparency facilitates participation and accountability, because it allows outsiders to see what is going on. This creates two main categories of transparency obligations. These categories can be further refined to allow for the different legal bases that transparency obligations have. Buijze did this for transparency obligations in EU law, distinguishing between transparency obligations rooted in the principle of democracy, those necessary to guarantee the rights of economic actors to ensure the functioning of the European common market, and those that can be derived from fundamental rights and comes up with six different categories of transparency obligations:¹⁶

- 1) Obligations that allow citizens to partake in informed democratic decision-making

¹³ *Öneryildiz v. Turkey* (App no. 48939/99) ECHR 2004-XII; *Budayeva v. Russia* (App no. 15339/02) ECHR 20 March 2008.

¹⁴ Japanese report to the IAEA, 2011, p. IX-2.

¹⁵ IAEA Fact Finding Mission, p. 3.

¹⁶ See appendix 1 for an overview of the different categories and the answers they provide to the questions posed below.

- 2) Obligations that allow citizens to hold public authorities accountable for their execution of the public will
- 3) Obligations that help economic actors make better informed decisions
- 4) Obligations that help economic actors assess the influence of public authorities' on the common market
- 5) Obligations that help human beings make decisions in areas that touch upon fundamental rights
- 6) Obligations that allow human beings to see whether public authorities respect fundamental rights

The benefit of this approach is that the purpose of transparency obligations can be used to determine what they should look like. As mentioned before, transparency is only required under European law when it contributes to a legally recognized goal. When we know why public authorities should be transparent, we can answer a number of questions.

- 1) Who should they be transparent to?
- 2) What should they be transparent about?
- 3) When should they be transparent?
- 4) Should they provide information on their own account, or only upon request?
- 5) Should the information that is communicated meet a quality standard?
- 6) To what extent are exceptions to the obligations allowed?
- 7) Is it possible to mitigate the negative effects of those exceptions?

Short answers to these questions are provided in appendix 1.¹⁷ The main take away is that the answers will differ for the six categories we identified. This framework is also valid for nuclear law. When we introduce transparency as a means to promote safety, we should determine the answers to the above questions by referring to the manner in which transparency can contribute to safety. First, transparency promotes safety because it allows people to take action to limit damage to their life and goods in case of an accident.¹⁸ Second, transparency increases norm compliance. Third, transparency creates accountability for mistakes and learning opportunities.¹⁹ In the first case, the targets of the transparency obligation are those individuals who are at risk. In the second case, the target may vary. In a democracy, the obligation to comply with legislation is essentially one towards all citizens: after all, they have enacted the legislation through their democratic representatives, the members of parliament. However, compromises are easy to justify: the citizens are unlikely to monitor all actions of all public authorities, and they might appoint a representative to hold regulatory authorities accountable. In that case, the target of the transparency obligation is primarily the appointed representative. If we adopt a more politically neutral stance, and make simple norm compliance rather than compliance with democratically established legislation our ultimate goal, transparency to the general public is unnecessary, and one can suffice with transparency towards an effective accountability forum.²⁰ Once again, it becomes clear that we need to think about what exactly we want to achieve by introducing transparency before we can assess whether our chosen means will be successful.

The answers to the questions identified above will also affect to what extent transparency poses a risk to security. Communicating information about a planned transport of nuclear fuel or radioactive waste to the

¹⁷ For a more extensive discussion see Buijze 2013.

¹⁸ An obligation from the fifth category.

¹⁹ Like the second and sixth categories, where transparency contributes to democratic and legal accountability. Note that the target of transparency differs between these categories. See further paragraph 2.3 below.

²⁰ The latter approach seems sufficient. The IAEA promotes an independent supervisor, who is not affected by governmental policy.

general public before it takes place poses a greater risk than communicating emergency plans to a regulatory authority for example.

This instrumental approach to transparency obligations, where the goal to be realized determines the shape of the transparency obligation as well as its weight in case it has to be balanced against other interests, can be of help when interpreting the open transparency obligations in nuclear law. Since Treaty texts rarely specify what sort of transparency obligations must be introduced, such a tool is sorely needed. In the remainder of this paper, we will use this approach of transparency obligations both to assess what sorts of obligations would be suitable to help achieve the goals underlying the introduction of (new) transparency obligations in nuclear law, and to assess whether the concrete obligations that have already been introduced or that have been proposed have a clear added value. In addition, we will consider whether transparency can be introduced in a way that maximizes its positive impact on safety while minimizing the risks it creates for security.

2. Transparency and Safety

2.1. How transparency can promote safety

We saw that after the accident with the Dai-ichi reactor in Fukushima, there was a call for more transparency about nuclear matters supposing that this would improve safety. We identified several reasons as to why transparency improves safety. First, it allows people to make informed decisions in the aftermath of a nuclear incident, so that damage can be reduced as much as possible. Second, transparency is believed to improve compliance with safety regulations. Finally, transparency in the aftermath of an incident facilitates learning and can decrease the risk of future accidents. In addition, the explanatory memorandum of the Directive refers explicitly to the Aarhus doctrine to justify public participation in license procedures. More in general, there have been a lot of discussions about the consequences of the Convention for the nuclear sector. The ACN²¹ regards the transparency obligations in the Aarhus Convention primarily as a tool to improve safety. Although this is arguably one of the goals, or at least effects, of the Aarhus brand of transparency, the Convention has much larger ambitions with regard to transparency. It is based on a far-reaching ideology about how the involvement of the general public in environmental decision-making can improve environmental quality, and embraces transparency as a tool that facilitates participation, legal accountability triggered by individual citizens and organizations, and direct democracy.

It is perhaps not surprising that the nuclear world has turned towards the Aarhus Convention to help inform its views on transparency. Where nuclear law is relatively silent on the purpose of transparency, the Aarhus Convention provides a bit more clarity, although it remains ambiguous. Under Aarhus, transparency serves several purposes and many of the obligations it contains are formulated broadly, and leave room for interpretation. The preamble contains references to the ECtHR's case law on article 8 of the ECHR, which designates access to environmental information as part of the right to respect for private and family life, but also to the promotion of the public interest in a clean and safe environment, and to the doctrine of democracy. Transparency has some use of its own as it enables individuals to decide upon the appropriate course of action when faced with dangers and risk, but is also, maybe even primarily, important as a necessary condition for public participation.

In short, the transparency obligations in the Aarhus Convention have been designed for a multitude of purposes, and are based on assumptions about the relation between transparency, direct democracy, and

²¹ Aarhus Convention and Nuclear.

environmental quality that may be difficult to translate directly to complicated technical issues. When the parties to the Convention decided that more direct democracy was a good thing with regard to environmental quality, did they consider whether this was true for decisions about nuclear energy as well? To see how the obligations in the Aarhus Convention must be applied to information about nuclear matters, it is wise to take a closer look at the theories, assumptions, and political choices that underlie the Convention. As we have seen, the interpretation of transparency obligations relies on theories of how transparency can contribute to the realization of underlying policy goals. In nuclear law, as in all other fields, we should derive from the principle of transparency only those obligations that serve legally recognized goals.

2.1.1 Transparency & participation as a means to improve the quality of public decisions

According to the preamble of the Aarhus Convention, access to information and public participation in decision-making enhance the quality and the implementation of decisions. This is relevant, since one of the problems identified in the aftermath of the Fukushima accident was the flawed implementation of the safety regulations by the Japanese operator.

There are several ways in which transparency can contribute to compliance with norms. Transparency contributes to the publicity of norms: rules will not be complied with if nobody knows they exist. In addition, it is thought that public officials' performance will improve merely because they know their actions can get out in the open.²² In addition, transparency allows outsiders to observe whether norms – safety norms in this case – are complied with. If they have the power to attach consequences to non-compliance, they will be able to hold public authorities to account quite effectively.²³ Finally, transparency allows for participation. Through participation, authorities can tap into the knowledge of other actors, and use resources not otherwise available to them to improve the quality of their decisions.

A preliminary point that must be made relates to the purpose of participation and transparency. Participation in its truest sense transfers decision-making power from public authorities to the general public.²⁴ This kind of participation, which Arnstein observes is exceedingly rare, is inspired by ideas about citizen empowerment and democracy. Although the Aarhus Convention does not outright reject this philosophy (see also paragraph 2.1.3 below), it is not specifically tailored to allow this. The participation rights it grants to citizens do not go as far as Arnstein proposes. There is no real co-decision power: decisions are made by public authorities, to the best of their abilities. The public authorities make use of the views expressed by citizens. The extreme form of participation as expressed by Arnstein does not fit with the purpose of the Convention either: its explicit goal of protecting and improving environmental quality does not allow for a large degree of direct democracy: citizens could very well decide that economic interests are more important, and in those cases, participation would run counter to the goals of the Convention.

Aarhus, rather than promoting fundamental democracy through its participation procedures, relies on participation as an instrument to improve the quality of decisions. Cassuto & Sampaio explain how this works.²⁵ They argue that environmental decision-making takes place in conditions of high uncertainty,

²² A. Prat, "The More Closely we are Watched, the Better we Behave?" in: C. Hood and D. Heald (eds), *Transparency: the Key to Better Government?* Oxford, Oxford University Press 2006, pp. 91-103; O. O'Neill, "Transparency and the Ethics of Communication," in Hood and Heald 2006, pp. 75-89.

²³ M.A.P. Bovens, "Analysing and Assessing Accountability: A conceptual framework," in *European law journal*, Vol. 13, Iss. 4, 2007, pp. 447-468.

²⁴ Sherry R. Arnstein, "A Ladder of Citizen Participation," *JAIP*, Vol. 35, No. 4, July 1969, pp. 216-224.

²⁵ David N. Cassuto and Rômulo S.R. Sampaio, "The Importance of Information and Participation Principles in

and that participation can help reduce that uncertainty. Different actors contribute their knowledge and help public authorities get a better picture of the interests and risks involved. If that is not possible, they say participation will at the very least improve the legitimacy and public acceptance of decisions: if people have had their say, they are more likely to accept the outcome of the procedure as just.

The difference between the various types of participation can be best summarized as citizen participation versus expert participation. In the first case, participation is inspired by normative principles like democracy and legitimacy. In the latter case, the quality of decisions is at stake.

In practice, there is often no clear distinction between these two kinds of participation. Citizens are, after all, experts about their own interests and the local community they are part of, at least they consider themselves to be so. Because of that, participation may look quite similar regardless of its purpose. However, when deciding on how to shape participation procedures and the corresponding transparency obligation, one must take these things into consideration: do we want to improve public authorities' decision-making or do we want to empower citizens, and if it is the former, to what extent can citizens function as experts; in other words, would their contribution truly improve any conditions on the ground, like the quality of the environment.

With regard to transparency as a tool to facilitate accountability, we see that the Aarhus Convention relies quite strongly on accountability to the courts. It uses citizens as an intermediary in this process: they are supposed to intervene when public authorities fail to comply with environmental law, and bring the case before the courts. The courts are the ones with the power to attach consequences to non-compliance, but citizens have to trigger the mechanism for it to work. Because of this, Aarhus provides generous possibilities for citizens to go to court. To make this possible, citizens must have information at their disposal which allows them to assess whether it will be useful to start a court case: they must at least have a strong suspicion that the law is being violated. Note that there are again a lot of implicit choices and assumptions about the role that citizens should play and their capacity to do so. It would be prudent to consider whether it is necessary and desirable to mobilize citizens to ensure that public authorities are accountable to the courts for complying with nuclear law, rather than to assume that the arguments for environmental law should be adopted in their entirety.

2.1.2 Transparency as a means to allow people to make informed decisions regarding their own safety

We have seen that transparency is important to allow people to protect their own life and health in the face of nuclear disaster. The Aarhus Convention does not make this argument very explicitly, but it is implicit in the recognition that adequate protection of the environment is essential to human well-being and the enjoyment of basic human rights, including the right to life itself. Article 7(4) of the Convention contains an obligation to provide information to people aimed at protecting life in a crisis.

This approach, where there is an obligation to provide information to citizens when it can help save their life, is well established in the case law of the European Court of Human Rights. In Budayeva, the European Court derived an obligation to give adequate warning about an impending mud stream from the right to life. Moreover, a right to environmental information does not only exist during times of crises, but also when it is business as usual. In particular, public authorities should inform citizens about grave risks to their health, as was the case in the Turkish case of Önyıldız, where the residents of an illegal slum were unaware of the risk that a nearby garbage dump would explode, a risk that did eventually materialize. In Guerra, the Court held that article 8 ECHR had been violated because the municipality had

failed to collect and disseminate information about safety procedures at a nearby chemical plant. The source of the information was a private entity: the plant itself had to draw up safety plans.

This obligation requires information about health risks to be communicated to at risk individuals, at the initiative of the public authorities – provided of course that they are – or should be – aware of the danger. Because this obligation is derived from the fundamental right to life, it will not be easy to depart from. Thus, it should be assumed to apply equally to information about nuclear risks. Indeed, it would not be unreasonable to assume that in a crisis situation, nuclear operators should share this burden: after all they are in a good position to assess what must be done, and may be able to save lives before public authorities have the same information at their disposal.

2.2. Legal recognition of transparency as a tool to promote safety

If, in the Aarhus doctrine, transparency is really an instrument to improve safety, allowing people to make informed decisions after a nuclear incident, improving compliance with safety regulations, facilitating the learning process of operators and public authorities after a nuclear incident and improving the quality of decision making by enhancing public participation, can we find legal recognition of this Aarhus doctrine in binding law? In par. 1 we already saw that the 2014 amendment of the Nuclear Safety Directive does indeed identify the importance of enhancing transparency on nuclear safety matters as a key lesson learned from the Fukushima nuclear accident.²⁶ The Council of the EU goes on to state:²⁷

Transparency is also an important means of promoting independence in regulatory decision-making. Therefore, the current provisions of Directive 2009/71/Euratom on the information to be provided to the general public should be made more specific as to the type of information be provided. In addition, the general public should be given opportunities to participate in the relevant phases of the decision-making process related to nuclear installations in accordance with the national framework for nuclear safety, taking into account the different national systems. Decisions on licensing remain the responsibility of national competent authorities.

The requirements of this Directive on transparency are complementary to those of the existing Euratom legislation. Council Decision 87/600/Euratom imposes obligations on Member States to notify and provide information to the Commission and to other Member States in case of a radiological emergency on their territory, whilst Directive 2013/59/Euratom includes requirements on Member States to inform the general public about health protection measures to be applied and steps to be taken in the event of a radiological emergency, and to provide at regular intervals updated information to the population likely to be affected in the event of such an emergency.

So indeed, though only recently, the Aarhus doctrine has found its way to legally binding European legislation on nuclear matters.²⁸ Accordingly, the Directive attributes the beneficial effects of providing and sharing information to transparency as a whole, without differentiating transparency obligations as we did in par. 1.

²⁶ Council Directive 2014/87/EURATOM, consideration (12).

²⁷ Council Directive 2014/87/EURATOM, considerations (12) & (13).

²⁸ While directive 2009/71/EURATOM did already contain a provision on transparency (art. 8), not a single word is devoted to goals or underlying principles of this provision.

2.3. Nuancing the Arhus doctrine: what types of transparency can potentially contribute to safety in the nuclear sector?

Now we have seen that transparency in its broad sense is indeed legally recognized as a tool to promote safety (par. 2.2), it is time to apply the theoretical framework developed in par. 1 in order to clarify which kinds of transparency can really contribute to safety en which cannot. To whom should public authorities be transparent, what should they be transparent about and when, should they provide information on their own account or only upon request, are questions that can help distinguishing between useful and useless transparency.

In this paragraph we will mainly develop on the first question: the target of transparency. We are going to identify different groups in society who are all concerned with the nuclear sector in a different way and see if and how each of these groups can benefit from transparency in their contribution to nuclear safety.

In a top down approach the first group we find is the society as a whole. Its members are first of all citizens, participants in democracy. Zooming in, we identify 'neighbours', people that live (or work) in the vicinity of a nuclear plant or near a railway where fissile material is transported. Apart from being a citizen like everyone, they are also potentially affected as a human being. Their fundamental rights (life, health) are at stake, which distinguishes them from the members of society in general. Focusing even more, we meet employees, people working on a nuclear site or physically involved in a nuclear transport. Likewise they are exposed to a potential breach of their fundamental human rights, but as a result of a choice, a decision they made to accept the job. Moreover, their claim for transparency will be addressed first of all to the employer, not to the public authorities. That is why we will set this group aside for the moment. The picture would not be complete without mentioning special interest groups. In case such a group sets nuclear safety as (one of) its goal(s) it adopts the role of the 'citizen' who wishes to make a contribution to improving the environment, entirely according to the Aarhus spirit. If, however, a special interest group aims at protecting the rights of specific individuals, like the neighbors or employees of a nuclear plant, it adopts the role of the 'human being' who wishes to safeguard its own life and health. Hereafter we will focus on the 'citizen' role of special interest groups.²⁹

How and to what extent can these three groups benefit from transparency in order to improve nuclear safety? This question can now be answered by analyzing the potential positive effects of transparency, set out in par. 1.3, for each of these groups. For instance, it is obvious that providing technical data on radiation levels in the vicinity of a nuclear plant or transport will generally not contribute to the safety of the neighbors: they need tailored information which enables them to decide whether they can stay or better move away. For a special interest group like Greenpeace however, the technical data can be indispensable to verify whether the public authorities have taken appropriate measures to ensure that the safety of the neighbors is guaranteed. The members of society as a whole (the citizens) need general information as to the past, current en future benefits and risks of generating nuclear energy, which enables them to make use of their democratic rights, like voting. Specific information regarding date, time and itinerary of a nuclear transport however, will hardly make any contribution in this area. A summary of this preliminary analysis can be found in the following table:

Table 1. Which type of information can contribute to safety?

Improve the quality of..	..private and..	..public decision making (outside scrutiny)
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²⁹ As a rule, organizations that aim at protecting the rights of specific groups are generally consisting of members of those specific groups. Therefore there is no added value in analyzing them separately.

Group	Role	Human Rights	Democracy	Participation	Accountability
Society	Citizen	None	General	None	None
Neighbor	Citizen Human	Specific	General	Specific	Specific
SI Group	Citizen	None	General	All	All

Underlying this table are some implicit assumptions.

As a rule, members of society in general will lack sufficient knowledge of nuclear matters to participate in the decision making of public authorities or to hold them accountable for the way they exercise their duties. Moreover, in many countries they will be legally excluded from participation or access to justice because of the lack of a special interest.

Neighbours have two roles. As a citizen they do not considerably differ from other members of society.³⁰ As a human being however, they need sufficient information both to make decisions regarding their own safety and to participate in decision-making which can potentially affect their own safety, and to hold the public authorities accountable if they do not take appropriate measures to guarantee that safety.

Special interest groups, finally, are supposed to operate on the same level of knowledge as the public authorities, which means that, generally speaking, all available information can help them scrutinizing decisions of the latter.³¹

If we accept these assumptions, we have created a model in which transparency has evolved from a 'one size fits all' concept into a bespoke instrument to promote safety. Each group will then receive the information it needs for fulfilling its own role. However, one could argue that this model will not work out in practice, since special interest groups and neighbours can share the tailored information they have received, with the other groups, so that finally anyone will possess all information that is distributed by the public authorities. Two observations can be made regarding this argument. First, it is not necessarily a problem if people receive information which was originally not addressed to them. For example, sharing specific 'neighbour' information with 'non-neighbours' can be entirely harmless, albeit the non-neighbour can make no contribution to its own safety with this information. Second, if sharing targeted information

³⁰ They may, however, have an additional role in local democracy.

³¹ This assumption implies that any group will not qualify as a special interest group in the sense we use it. National law should provide for quality standards (e.g. number of members/supporters, age, continuity, activities, proven knowledge), which special interest groups have to meet. Cf the requirements on NGO's pursuant to art. 11 of the Aarhus Regulation. [Godelieve Vandepitte, 'Questions raised for operators of nuclear installations by the implementation of the Aarhus and Espoo Conventions as well as other international instruments in the environmental field,' Nuclear Intra Jura Congress 2009, par. 2.5.1.3]

can be harmful, special legal or contractual provisions can be made, like secrecy obligations or limited availability of information.³²

What about the other questions, mentioned on top of this paragraph? When public authorities should be transparent³³ will be assessed in par. 4, since delayed transparency can help mitigate the potentially harmful effects of providing sensitive information. Whether the public authorities should actively inform the public or only provide information on request³⁴ is a question that does not need a specific analysis in the nuclear field.

Quality standards³⁵ have already proved to be useful with respect to environmental impact assessments (eia). Full eia-reports often contain a wealth of information, which can be, due to its technical nature, inaccessible to match. In order to sustain the objectives of the eia (*inter alia* inform the public and help participation in decision-making) most eia-legislations require a non-technical summary. The same differentiation principle can be applied to transparency according to table 1 above. Where special interest groups, provided with the necessary technical expertise, may be able to digest technical nuclear information in a sensible way, neighbours may benefit a lot more from the same information if it is provided to them by means of a non technical summary. Needless to say that the potential harmful effects of transparency, which we will treat of in par. 3, are often reduced in case of a non technical summary.

The two final questions of par. 1.2, to what extent exceptions to transparency obligations are allowed and if it is possible to mitigate the negative effects of those exceptions will be treated in par. 3 en 4, with a focus on public security as a ground for an exception.

2.4. Is their expected added value in transparency from the operator to the public?

Transparency of the operator to the public starts with transparency about the operating organization of the operator. In an operating organization the safety culture is of the essence. As it is stated above the efficiency and applicability of norms starts with the knowledge of such norms, especially by the employees. The operator has to create awareness amongst its employees in order to make them acting compliant to the (well-known) safety standards. To enhance compliancy, a transparent atmosphere is of the essence. In an open and transparent atmosphere it will be easier for employees amongst each other to appeal to compliance with safety standards and procedures. The operating organization has to serve as an example in acting compliant with safety standards. As a result the operator can be very transparent to the public about the way the operator is dealing with nuclear safety. Openness or transparency in itself will not cause a higher level of nuclear safety; it creates the circumstances in which a high standard of nuclear safety can flourish.

Taking into account that transparency in itself will not cause a higher level of nuclear safety, but that a transparent atmosphere will encourage a higher level of nuclear safety, resulting in a continuously improving operating organization, the question remains whether confidentiality or non-transparency for security reasons will in the end lead to a lower level of nuclear safety. To put it differently: will a certain level of confidentiality towards the public cause harm to the unaware public? One might say yes, because confidentiality will prevent the public from taking a decision in areas that touch upon fundamental rights. Due to the fact that the public is unaware of the event happening, it cannot take a considered decision to get away. One might also say as long as we are transparent at the decision making stage, supervision is

³² We will elaborate on this in par. 4.

³³ Par. 1.2, question 3.

³⁴ Par. 1.2, question 4.

³⁵ Par. 1.2, question 5.

well arranged including towards the safety culture of the nuclear operator, a certain level of confidentiality will enhance security and not necessarily lower the level of nuclear safety.

3. Transparency and Security

3.1. Why transparency and security can be at odds

For nuclear matters the question raised in the title above seems almost too trivial to answer. Examples are easily found: if terrorists have detailed knowledge of the storage and transport of enriched uranium, their reprehensible activities and objectives will be facilitated. Other examples will be given in par. 3.3. Nevertheless we believe that reflecting on this question can be useful, if not essential, for reducing or even neutralizing tensions between transparency and security.

With that objective in mind, we will first identify how security interests are taken into account in nuclear law.³⁶ After sketching some practical experiences from the Netherlands,³⁷ we will then extend our analysis of par. 2 by including public security as an interest that may override transparency objectives.³⁸ We will argue that a differentiating approach of transparency can significantly reduce the tension between improving safety and maintaining public security.

3.2. Security exceptions to transparency obligations

For the purpose of this paragraph, we analysed international and European binding instruments, like treaties, conventions and EU-directives, in respect of their taking public security into account as an interest that can be at odds with transparency.³⁹ In analysing these instruments we found a pattern: the obligation to provide information in a broad and general sense as well as its usefulness is virtually presupposed. However, this broad transparency obligation is persistently followed by an equally broad exception clause, stating that overriding interests, such as security, recognised in international or national legislation can justify secrecy:⁴⁰

Information shall be made available to the public in accordance with relevant legislation and international instruments, provided that this does not jeopardize other overriding interests, such as security, which are recognized in relevant legislation or international instruments.

³⁶ Par. 3.2.

³⁷ Par. 3.3.

³⁸ Par. 3.4.

³⁹ E.g. the Aarhus Treaty and its Implementation Guides, the Convention on Physical Protection of Nuclear Material (Treaty of New York 1980) including its amendment of 8 July 2005 (not yet entered into force), The Convention on early notification of a nuclear accident of 26 September 1986, the Convention on assistance in the case of a nuclear accident or radiological emergency of 26 September 1986, the Joint convention on the safety of spent fuel management and on the safety of radioactive waste management of 29 September 1997 Council Directive 2003/4/EG on public access to environmental information, Council Directive 2009/71/Euratom on nuclear safety, as amended by Council Directive 2014/87/EURATOM and Council Directive 96/29/EURATOM establishing basic safety standards as amended by Council Directive 2013/59/EURATOM.

⁴⁰ Article 8.2 of the amended nuclear safety directive. Cf. art. 4.2 of the public access to environmental information directive, art. 77 of the basic safety standards directive.

Like transparency, the issue of security is treated in a very general matter. When, why and under which circumstances security can justify a limitation of the broad transparency obligations remains unclear: the international legislators apparently consider a mere reference to national or international legislation sufficient. The conventions are quite explicit on this matter; they generally state that the contracting parties are free to determine whether information is confidential under national law, in which case it may only be used for the purpose it has been provided for.⁴¹

3.3. Conflicting values in practice: some experiences from the Netherlands

Two types of situations can be identified, the first one when the radioactive material is on site and the second one when the radioactive material is on transport.

In the first situation the ultimate aim is to keep and store the radioactive material in the dedicated place. How to deal with the material in a safe way has already been described, it is called nuclear safety. The question is whether nuclear security comes under pressure whilst being transparent on nuclear safety matters. In general it is of the highest importance that no unpermitted persons can have access to the places where the radioactive material is stored, nor that unpermitted persons can get access to the places where the nuclear process takes place or is controlled. At that moment it is not unlikely that there can be a conflict of interest especially when it comes to transparency. If an operator is obliged to be transparent about the technical process on site for example when the operator deals with a license application and the substantiation to that application, such information can be of help for persons that are meant to be excluded from access to a nuclear installation. In 2003 a prominent member of the Hofstadgroup⁴², in the Netherlands, named Samir A. was arrested. In his possession was amongst other things like explosives, a plan of the nuclear power plant in Borssele. Such plan can be downloaded from the website of the operator of the power plant as part of the transparency policy of the operator. Transparency is part of the process of creating public participation and support (transparency obligation no 1, 2 and 5). How to find a balance between openness on one hand and security measurements on the other hand? Is it wise to provide information where you are situated, the site plan, the installation, how an operator is dealing with the operating process and on the other hand to be forced to build higher fences, enlarge the gated area, enforce the security team to try to keep unpermitted persons outside? People might have ideas to use radioactive material for inappropriate purposes and to do harm to innocent people.

Another situation is how to deal with transports of radioactive material. In the Netherlands the used fuel from the nuclear reactor is sent to France for reprocessing. The used fuel assemblies are packed in dedicated transport casks which casks are subject to a long and intense certification process. Certification is based on the IAEA⁴³ requirements for transport casks. Even in cases of severe accidents the radioactive material has to stay in the casks and no contact with the environment can take place. However such transports are not undisputed. A transport license will be granted for a certain period of time, like three years in which period a certain number of transports can take place. The licensing procedure is not subject to full public participation. Only interested parties can raise objections to the granting of the license. Neighbours (within a radius of 25 kilometres (currently) and special interests groups that comply with certain requirements like dedicated object are considered as interested parties. Looking at recent legal proceedings with regard to nuclear transports two main objections can be

⁴¹ E.g. art. 36 of the Joint convention on the safety of spent fuel management and on the safety of radioactive waste management.

⁴² A group of radical Islamite people and defined as a terroristic group by the Dutch Security Service

⁴³ <http://www.wnti.co.uk/nuclear-transport-facts/regulations.aspx>

identified: at first with regard to nuclear safety. How safe can it be to transport radioactive material? In the eyes of opponents, it cannot! Especially not when it comes to radiation and environmental effects. And second, with regard to security. Proliferation and possible terroristic attacks will be encouraged by transporting radioactive material. With regard to the first argument: the requirements that are set to transport casks for the transport of radioactive material are aiming to prevent external radiation or contamination. The design also foresees that no criticality of the radioactive material can occur. The design and construction of such transport casks are subject to very strict requirements and certification. Strict international regulation is applicable. Once the design is approved, the nuclear safety is supposed to be guaranteed. At which stage the public will be involved in the decision making process? Is that at the moment certification of the transport casks takes place? It seems not very likely that the average citizen will be competent to give its view on such a technical and complicated design. Not even special interest groups will have the required knowledge on such matters. In such cases the public has to rely on the experts on the side of the competent authorities that will grant such a certificate. Even when the authorities are open and transparent on the certification process, it will not really help the public by making a decision. Due to the fact that transparency on such technically complicated matters is not likely to contribute to a better understanding. However certain representatives of the public will look for other ways to create influence on the process. Mainly special interest groups make use of the opportunity to raise objections to the licensing of nuclear transports by stating that the transport of nuclear material is very unsafe and very unsecure. With regard to the first statement: it can be argued that the protection of the public and the environment (the nuclear safety) is included in the design of the transport cask. The place of the transport casks will not influence the safety. In other words whether the loaded casks is on site or on transport this will not cause any change of risk level with respect to radiation or contamination of the public or the environment. Transparency about the way the authorities have investigated the technical substantiation of the license application can be of help. Not that such transparency will create a full understanding of the design and its safety, but transparency on the process can create a better understanding that the certification of such transport casks is subject to a long and thorough investigation process. With regard to the second statement: to emphasize the stated security risk, citizens and special interest groups organise demonstrations preferably at a moment a nuclear transport takes place. Such demonstrations may create unsecure situations, like people sitting on the railway or blocking entrances of nuclear sites, which results in the employment of Special Forces to accompany the transports. Such employment strengthens the idea that nuclear transports are complicated and dangerous. It is not difficult to understand that keeping such transports confidential will prevent a lot of trouble, as well with respect to man force as costs.

3.4. What types of transparency are likely to harm security?

In par. 3.2 we saw that legislation in the nuclear field is not only very general in its approach to transparency and its contribution to nuclear safety, but accordingly general in accepting exceptions on transparency, based on overriding interests, like security. Needless to say that this non-specific approach does not help to solve (political or judicial) conflicts on freedom of information. Legislators and judges can hardly find tools to establish whether and when security should prevail to safety and *vice versa*. We believe that differentiating transparency obligations, as set out in par. 1, can reduce the tension between transparency and security interests, and help balancing them in a sensible way. To illustrate our position, we reiterate table 1, showing how and to what extent 'the public' can benefit from transparency in order to improve nuclear safety. Now we add an assessment of which stream of information can potentially harm security:

Table 2. What types of information can harm security?

Improve the quality of..		..private and..	..public decision making (outside scrutiny)		
Group	Role	Human Rights	Democracy	Participation	Accountability
Society	Citizen	None ☺	General ☺	None ☺	None ☺
Neighbour	Citizen Human	Specific ☺	General ☺	Specific ☺	Specific ☺
SI Group	Citizen	None ☺	General ☺	All ☺ ☺	All ☺

Underlying this table are some implicit assumptions too.

Starting point of our analysis is that the respective interested parties are entitled to the information they need to fulfil their role (as a citizen in society, as a human being with fundamental rights, as an accountability forum) in an effective way, but not to more information than necessary to do so.⁴⁴ From this starting point a set of more specific assumptions can be derived.

First, we assume that providing information of a general nature will not affect security.⁴⁵ In other words: the nature of the information which enables the public to effectively exercise their democratic rights is as a rule non-sensitive.

Second, we assume that neighbours, being persons living in the vicinity of the nuclear activity, will need more and more detailed information to safeguard their own fundamental rights and to participate in decision making. The increased level of detail can affect security, e.g. specific information on nuclear transports: itinerary, scheduling, etc.⁴⁶ However, the tension between safety and security remains rather modest here. Based on our practical experience, we expect that a judgment based on the questions mentioned in par. 1.2 can be completely satisfactory for both the neighbour and the public authorities/operator.⁴⁷

On the basis of these assumptions we can conclude that the real tension between transparency and security is restricted to special interest groups.⁴⁸ That conclusion is encouraging, as the number of special

⁴⁴ Note that this approach is fundamentally different from e.g. the Aarhus doctrine.

⁴⁵ Represented by ☺.

⁴⁶ Represented by ☺.

⁴⁷ E.g. which level of detail is really needed to satisfy the neighbour, which information can be provided later, when it has become less sensitive, is it possible to summarize information, leaving out sensitive details, etc.

Represented by ☺, when it acts as an accountability form, and ☺ ☺ when it participates in decision making. The difference is related to providing information ex ante (participation) or ex post (accountability).

interest groups is usually limited, compared to neighbours and the public in general. The size of this category is further reduced if we take into account that not every self-appointed special interest group will qualify as such. The Aarhus Regulation for example, requires that a special interest group or non-governmental organization is a non-profit organization that has existed for at least two years and whose objectives and activities cover the subject matter that is requested for internal review.⁴⁹ It is not difficult to imagine other requirements that should be met by special interest groups before they are entitled to extensive information on nuclear matters. Moreover, specific provisions can be adopted to safeguard the confidentiality of the information provided to the special interest groups, like provisions that inhibit dissemination of the sensitive information⁵⁰, limitation of the number of members of the special interest group that have access to the information, and – of course – confidentiality clauses and statutory provisions, enforced by contract and criminal law.

4. Conclusions: implementing transparency in a way that maximizes safety while minimizing security risks

4.1. Overlap of types of transparency that promote safety and types of transparency that harm security.

As we have seen, it is possible to design transparency obligations in a way that promotes safety while posing minimal risks to security.

Transparency can promote safety by providing neighbours with the information they need to make informed decisions about their own safety. This includes information about the risks of living and working in the vicinity of a nuclear site, or next to a route used for nuclear transport, and information about the sort of precautions people can take to reduce risks, both under ordinary conditions and in case of an incident. Public authorities will be under an obligation to provide such information based on international human rights law, and it will be hard to justify exceptions with an appeal to security interests. However, this kind of information will usually not be sensitive, because of its limited scope.

Transparency can improve norm compliance: people tend to perform better when they know their behaviour can be observed. This kind of transparency is potentially dangerous. It would apply to detailed operational information. However, for the effect to occur, it does not matter much who is doing the observing. Thus, information does not need to be made available to the general public at least not to achieve the benefits associated with people knowing their performance can be observed by a third party.. Instead, we can select a more suitable accountability forum, like an independent supervisor, where the information will be in reliable hands. In addition, it is acceptable if information is made available with some delay. Again, real tension between safety and security is easily avoided.

Transparency is needed for accountability and can promote learning. This requires ex-post transparency. Thus, because sensitive information can be provided with some delay, the security risk will be limited. Some information will remain sensitive for quite some time, like the location of nuclear waste. Here the tension is greater. Some of that tension can be relieved by choosing an appropriate accountability forum, and supplying the general public with more general information only.

Finally, transparency can facilitate participation, which may increase safety by ensuring the interests of those at risk are properly taken into account, or by making outside knowledge available to decision-makers. This is easily the instance where the tensions between transparency and security are the largest. If

⁴⁹ Art. 11 Aarhus Regulation 1367/2006/EC.

⁵⁰ Like providing the information in oral form, or in writing excluding the possibility of multiplication.

expert participation is required to improve safety, participants need rather detailed information about operations, safety protocols and the like. Only then the involved participants can give an informed opinion on how safety can be improved. This is sensitive information, which must be given at an early stage. If public participation is to ensure that neighbours' concerns are taken into account, information will also be reasonably detailed. It must also be communicated at an early stage.

The tension between transparency as a tool to promote safety on the one hand and security on the other is real. However, in many cases, transparency can improve safety without creating additional security risks. If transparency is introduced to facilitate participation, in the supposition that participation will lead to improved safety, the risks for security are the largest. However, there are some methods to reconcile the need for transparency with the protection of security.

4.2. Reconciling transparency and security

If there is a tension between transparency and security, there are several ways to alleviate this tension. The first option is delayed transparency. In this scenario, information that poses a security threat when released is released at a later moment, when the risk is reduced or has disappeared. Second, the target of transparency obligations can be modified. Rather than communicating information to the group that has a direct interest in it, the information is communicated to a fiduciary, which uses the information on behalf of its trustees. An example is a lawyer that gets access to sensitive information on behalf of his client. Third, active transparency can be replaced by passive transparency. This means authorities wait with making information public until people request it, to ensure that the threat its release poses for security only materializes if there is in fact an interest in the information becoming public. Finally, it is possible to introduce conditional transparency, where the target of a transparency obligation has to meet certain criteria to gain access. Public authorities could require interest groups to show they have sufficient public support, or they could have them sign an agreement to keep information confidential prior to getting access to it. Alternatively, they could provide access to information on site, and prohibit people from making copies.

Delayed transparency poses less of a threat to security and still helps realize safety through transparency in several ways. However, it is irrelevant when transparency aims to help people to make better choices, and when transparency aims to facilitate participation. In those cases, people will need the information in time to act upon it or to react to it. If they do not get it in time, the information loses its value.

Transparency to fiduciaries on the other hand is a valid tool to reconcile transparency and security. If sensitive information is needed for accountability, it is perfectly feasible to appoint a fiduciary as the accountability forum. Independent supervisors are sufficient to ensure that operators and their employees take the extra care associated with being watched. Participation through fiduciaries seems acceptable as well, especially when these fiduciaries are better informed than general citizens and have their interests at heart.

Relying on passive transparency can work as well. Often, the recipients of information will be in a better position to assess which information they need than the public authorities. In those cases it makes sense to wait with making sensitive information public until it is requested. In that manner, the risks associated with releasing the information occur only when there is an actual need for the information.

Conditional access to information is an option as well, although it may be hard to implement successfully. These methods ensure that information can still be used by recipients for the purpose it was for, but hampers its further dissemination and may help prevent it falling in the wrong hands.

4.3. Irreconcilable tensions?

Irreconcilable tensions between transparency *as a tool to increase safety* and security will be rare. In principle, security risks provide an argument against certain kinds of transparency, at certain times, to certain targets, and safety concerns provide an argument in favour of other kinds of transparency, at other times and to other targets. If overlap occurs anyway, legally there is no one right answer. It is essentially a policy choice which of the interests should prevail. However, when making this choice it is wise to keep in mind that safety gains may be illusory if transparency increases security risks. In addition, because transparency is instrumental in nature, alternative paths to promote safety may be explored. If other tools that are equally effective are available, a lack of transparency becomes more acceptable.

In practice, transparency and security may clash more often, since transparency can serve other purposes as well. If these clashes exist, it is up to the legislator or the administration – within the boundaries set by the legislator – to choose between those purposes. However, in such cases, the argument that transparency promotes safety carries no weight, and the security risk must be balanced against what other purposes transparency may serve.