

A procedural approach to distributing responsibilities in R&D networks

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Abstract In professional settings, people often have diverse and competing conceptions of responsibility and of when it is fair to hold someone responsible. This may lead to undesirable gaps in the distribution of responsibilities. In this paper, a procedural model is developed for alleviating the tension between diverging responsibility conceptions. The model is based on the Rawlsian approach of wide reflective equilibrium and overlapping consensus. The model is applied to a technological project, which concerned the development of an in-house monitoring system based on ambient technology. The development of this innovative technology raised questions among the technological researchers about its social acceptance and the way issues related to privacy and security should be addressed. The case is analyzed in terms of two procedural norms (reflective learning and inclusiveness), which are based on literature on policy and innovation networks. Analysis of the case shows that, in a pluralist setting, a procedural approach can be useful for encouraging discussion on the legitimacy of different responsibility conceptions and the question what a fair responsibility distribution amounts to.

Zusammenfassung In professionellen Kontexten haben Menschen oft unterschiedliche und konfligierende Vorstellungen von Verantwortlichkeit und bezüglich der Frage, wann es gerechtfertigt ist, jemanden zur Verantwortung zu ziehen. Das kann zu unerwünschten Lücken in der Verteilung von Verantwortlichkeiten führen. In diesem Artikel wird ein verfahrensorientiertes Modell entwickelt, das die Spannung zwischen strittigen Vorstellungen von Verantwortlichkeit mindern kann. Dieses Modell basiert auf dem Rawlsschen Ansatz des weiten Überlegungsgleichgewichts und übergreifenden Konsenses. Dieses Modell wird auf ein technologisches Projekt angewandt, in dem ein hausinternes Überwachungssystem, basierend

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auf Umgebungstechnologie, entwickelt wird. Die Entwicklung dieser innovativen Technologie ruft bei den Ingenieuren Fragen bezüglich der gesellschaftlichen Akzeptanz und der Weise, wie Themen der Privatsphäre und Sicherheit aufgegriffen werden sollten, auf. Dieses Beispiel wird mit Hilfe zweier prozessorientierter Normen (reflektives Lernen und Inkludivität) analysiert, die aus der Literatur über Verwaltungs- und Innovationsnetzwerke stammen. Eine Analyse des Beispiels zeigt, dass ein verfahrensorientierter Ansatz in einem pluralistischen Kontext nützlich sein kann, um eine Diskussion über die Legitimität verschiedener Verantwortungskonzepte und einer gerechten Verteilung von Verantwortlichkeiten anzuregen.

Resumée Dans le contexte professionnel, les individus ont souvent des conceptions diversifiées et compétitives de la question de la responsabilité et/ou celle de savoir quand il est équitable de tenir quelqu'un pour responsable. Cela risque de susciter d'indésirables lacunes dans la répartition des responsabilités. L'article présente un modèle procédural, mis au point pour atténuer la tension entre les conceptions divergentes sur la responsabilité. Le modèle se base sur l'approche de Rawls qui considère une large conception de l'équilibre réfléchi et du consensus chevauchant, dans une société pluraliste. Le modèle a été appliqué à un projet technologique concernant le développement d'un système de surveillance interne, qui est basé sur une nouvelle technologie de l'intelligence ambiante. Le développement de cette nouvelle technologie a soulevé des questions parmi les chercheurs en technologie, sur l'acceptation sociale et sur le traitement des problèmes liés à la vie privée et à la sécurité. Le cas a été analysé selon deux normes procédurales (l'apprentissage réflexif et l'inclusivité), qui sont basées sur la documentation relative à la politique et aux réseaux sociaux. L'analyse du cas montre qu'une approche procédurale, appliquée dans un contexte pluraliste, peut servir à encourager la discussion portant sur la légitimité des conceptions différentes de la responsabilité et sur la question de savoir ce que représente une répartition équitable des responsabilités.

1 Introduction

Technological research is increasingly carried out in networks of organizations with different kinds of actors involved. These networks often lack a strict hierarchy and a clear task division (cf. Callon et al. 1992; Rogers and Bozeman 2001; Saari and Miettinen 2001). Consequently, decisions are subject to negotiation instead of top-down decision making. This increases the likelihood of the problem of many hands, which is the difficulty, even in principle, to identify the person responsible for some outcome (Bovens 1998; Thompson 1980). The occurrence of this problem in Research and Development (R&D) is especially undesirable, since the introduction of technologies can be accompanied by risks and unforeseen side-effects as well, often with high impact (e.g., the use of asbestos, CFCs, DDT, nuclear waste and the greenhouse effect). If no one is responsible for addressing these issues, the implementation of technologies might result in harmful consequences for society.

Research has shown that the problem of many hands can be partly traced back to different views on responsibility (Doorn 2010b). In a pluralist society, people have

different views on what responsibility amounts to and under what conditions one is responsible. Whereas some people defend a virtue ethical approach to responsibility, others take a deontological or consequentialist stance (see e.g., Nihlén Fahlquist (2006), Williams (2008) or Goodin (1995) for a discussion of some of these approaches). Responsibility conceptions can differ in at least two ways. First, people may have a different understanding of what responsibility actually *means* (e.g., giving an account of something, to compensate for potential loss, to have a task to do something, to take care of something). Secondly, people may have different conceptions on when a person *is* responsible. In this paper, I focus on the second type of diversity: diversity in opinions on when a person is responsible.

The different conceptions may lead to different distributions of responsibilities. People defending a virtue ethical approach to responsibility, for example, may consider it a researcher's responsibility to show the merits of a technology to the broader society, whereas people with a more duty-based conception of responsibility may think in terms of a formal task description and consider this particular responsibility not to be part of that description.

In order to do justice to this pluralism of responsibility conceptions, there is a need for a distributing procedure that leads to a workable agreement but that, at the same time, leaves room for different responsibility conceptions without favoring any one in particular. Simply distributing on the basis of majority rule is potentially unfair to groups representing minority views.

In this paper, I develop an approach that is based on procedural political theory. The underlying thought is that people do not have to agree on substantive conditions which tell when a person is responsible as long as they agree on the *procedure* for distributing the responsibilities (given that they have a shared understanding of what responsibility means. The latter is important to prevent people from talking at cross-purposes). If such a procedure, or its outcome, is accepted by all people involved as representing the "fair terms of cooperation," this might help reconcile the pluralist responsibility conceptions and, ultimately, alleviate the problem of many hands. In order to test the applicability of political theory to responsibility distributions, the model of procedural justice is applied to a real case. The guiding question is whether a procedural approach contributes to reconciling the pluralist responsibility conceptions.

The outline of the paper is as follows. Following this introduction, I sketch a procedural approach to justice based on Rawls' political liberalism. After explaining the approach, I describe two procedural norms that are derived from policy and innovation theory. Subsequently, I apply the approach to an empirical case in order to see whether the method contributes to reconciling the pluralist responsibility conceptions. In the final section, conclusions are given, together with recommendations for further research.

2 A procedural approach to justice: Rawls' political liberalism

Professional responsibility and the distribution thereof is a topic that has gained increasing attention in recent years. Not only the scholarly literature on professional

ethics but also professional settings themselves often reveal a large variety in responsibility conceptions. Adherents of virtue ethics or care ethics, for example, emphasize the agent's character and the morally relevant features of a situation, herewith trying to answer the question what a responsible person in this situation would do (Ladd 1991; Oakley and Cocking 2001; Van Hooft 2006). Professional responsibility in duty ethics is often defined in terms of preventing wrong-doing. The main question in duty ethics is what the agent's duty is and what rules she should follow (Van Hooft 2006:9–17). Yet another approach is a consequentialist conception of responsibility, such as defended by, for example, Goodin (1995). According to this approach, responsibility should be conceived as largely a matter of result-oriented tasks.

In professional networks, these different perspectives may all be represented by the different actors constituting the network. Moreover, if we recognize the political ideal of pluralism, these different perspectives are all *legitimate*.¹

In R&D networks,² this pluralism in responsibility conceptions leads to the problem of how to distribute responsibilities. Since professional networks often lack strict hierarchical relations, decision making is done on the basis of mutual negotiations rather than top-down decision making. It remains therefore open how responsibilities should be distributed. Even if people would agree what an engineer's professional responsibility involves (e.g., the task to prevent certain risks stemming from a technology), it is not obvious how this responsibility should be distributed among the engineers constituting the research team. Should it be done in as early a stage of technology development by the team member doing fundamental research or by the team members commercially exploiting the technology? The answer to this question is partly dependent on the responsibility conception one endorses. The pluralist thesis implies that the diverse and competing visions of responsibility cannot be reduced to one overarching conception. Hence, people should somehow find a consensus concerning how responsibilities are to be distributed. However, what counts as a *justified* consensus remains open; not any consensus will do. Even in the absence of a strict hierarchy, power relations may still be present. Critics of consensus policy often warn that the promotion of consensus is coercive, notwithstanding its democratic aims. The promotion of consensus runs the risk of negotiating the interests of the most powerful. If one actor defends a virtue ethical approach to responsibility but agrees to distribute responsibility according to tasks in order to gain something else in return, it is questionable whether the agreement counts as a *justified* consensus. In order to assess which kind of consensus can be considered justified (where justified is understood as “doing justice to pluralism without favoring one view over the other”), we need a framework that incorporates both the ideal of consensus and that of pluralism.

¹ In this paper, pluralism is understood as the acknowledgment of diverse and competing values and visions of the good life. It is assumed to be the cornerstone of democracy because it distributes power over multiple centers, herewith countering authoritarianism (Dryzek and Niemeyer 2006). According to the pluralist thesis, conflicting private values cannot simply be reduced to single public values.

² In this paper, I use the term R&D network to refer to professional teams working on a common project and not to the wider scientific community (which is sometimes also referred to as network).

In political theory, the idea of procedural justice has emerged as a way to provide such a framework. The term procedural justice refers to the way procedures (e.g., decision making procedures) are structured so that their outcomes can be considered fair. The term is especially relevant in pluralist societies where people often cannot agree on substantive views on what justice amounts to. An example of procedural justice is the principle that those who are affected by a certain decision be afforded the opportunity to participate in the decision making.

In recent decades, different solutions have been proposed to find a workable middle ground between the ideals of consensus and pluralism, all balancing substantive views on justice with procedural requirements. A highly developed and differentiated procedural political theory is Rawls' political liberalism.³ Rawls attempts to propose the formal conditions under which the decision making can be deemed fair. His theory is particularly attractive, because it provides both an elaborated *justificatory* framework and a *constructive* framework for encouraging reflection (Doorn 2010a).

Central in Rawls' theory are the concepts of overlapping consensus and wide reflective equilibrium (WRE). Rawls' aim was to develop a criterion of justice that would be agreed upon by all under conditions that are fair to all (Rawls 2001:15). Although Rawls at first wanted to develop a substantive theory of justice for a relatively homogeneous well-ordered society, he revised this idea of a well-ordered society in his later work. Recognizing the permanent plurality of incompatible and irreconcilable moral frameworks within a democratic society, he introduced the concept of overlapping consensus. People are able to live together despite conflicting moral values and ideals as long as they share a moral commitment to the society's basic structure.

People with different comprehensive doctrines must be able to justify for themselves the acceptability of the claims of political justice (Rawls 1993:28, 1995:143, 1999 [1971]:28). Rawls introduced the idea of reflective equilibrium to refer to this individual justification. In this idea, a distinction is made between three levels of considerations: (1) considered moral judgments about particular cases or situations, (2) moral principles and (3) descriptive and normative background theories. Assuming that all people want to arrive at a conception of justice that yields definite solutions and that is complete, in the sense that it is more than a mere collection of accidental convictions, people should aim at coherence between the considerations at the different levels. We speak of *equilibrium* if the different layers cohere and are mutually supportive; it is called *reflective* if the equilibrium is arrived at by working back and forth between the different considerations and if all are appropriately adjustable in the light of new situations or points of view; and it is called *wide* if coherence is achieved between all three levels of considerations and not only between the considered judgments and moral principles (in which case we speak of *narrow* reflective equilibrium). Although people with different comprehensive doctrines might arrive at different WREs, they likely have an overlap when

³ I do not want to suggest that Rawls' theory is the only procedural theory. Deliberative democracy, such as defended by, among others, Cohen (1989, 1997) and Elster (1986, 1998), is an other example of a highly developed procedural theory. The concept of deliberation can also be linked to the work of the German philosopher Jürgen Habermas (1990).

it comes to the basic principles of fairness. This “shared module” is what Rawls calls the overlapping consensus (Rawls 2001).

Dryzek and Niemeyer (2006) argue that, notwithstanding its focus on formal structure, the establishment of an overlapping consensus still requires agreement on the substantive values underlying the procedure.⁴ The management of pluralism requires a shared tradition (such as liberalism) or a shared set of values to acknowledge the legitimacy of other comprehensive doctrines (p. 636). As such, the approach seems still biased toward liberalism. However, Rawls makes a distinction between different forms of justification, allowing some to be more substantive than others. The complete idea of *justice as fairness*⁵ will most probably not be part of shared WRE, but in a plural society it can still be endorsed by reasonable comprehensive doctrines as a *political* conception of justice, that is, as a basis of social unity in a constitutional democracy with a plurality of reasonable but incompatible—religious, philosophical and moral—doctrines. People with divergent comprehensive doctrines can overlap in their acceptance of a conception of justice, because they are likely to share at least some beliefs about reasonable pluralism. They do not have to agree on all particular decisions, but they do agree on “principles of fairness” related to the political realm, which get shape as the society’s basic institutions. Being the focus of an overlapping consensus, these principles specify the fair terms of cooperation among citizens and the conditions under which a society’s basic institutions can be deemed just (Rawls 1993). Rawls calls this *pro tanto* justification, which draws on public reasons or arguments only (i.e., values, judgments, principles and background theories valid for the public domain). It is done “without looking to, or trying to fit, or even knowing what are, the existing comprehensive doctrines” (Rawls 1995). An individual citizen can then try to fit this political conception of justice into his own comprehensive doctrine. This is what Rawls calls full justification, which is carried out by an individual citizen as a member of civil society and in which the citizen accepts a political

⁴ A similar criticism comes from Habermas, who argues that Rawls introduces a particular conception of the moral person into his theory. According to Habermas, it is especially the sense of fairness and the capacity of the good which are in need of prior justification (Habermas 1995:112).

⁵ The term *Justice as Fairness* is used by John Rawls to refer to his distinctive theory of justice in which he developed two principles for organizing modern welfare state. The first principle, known as the equal liberty principle, states that each person is to have an equal right to the most extensive basic liberty compatible with similar liberty for others. The second principle describes two conditions that are to be satisfied in case of social and economic inequalities: (a) The inequalities are to be attached to positions and offices open to all under conditions of fair equality of opportunity (the fair equality of opportunity principle); and (b), The inequalities are to be to the greatest benefit of the least advantaged members of society (the difference principle; Rawls 1993:5–6, 2001:42). At the philosophy seminar of the Royal Institute of Technology (Stockholm), where I presented a draft version of this paper, I was rightly pointed to the fact that Rawls derives fairness from his veil of ignorance, which assumes that people do not know which comprehensive doctrines they adhere to. Under this condition of ignorance, justice implies fairness and vice versa. This means that only for the first kind of justification, the terms justice and fairness could be used interchangeably. However, in order to be consistent with the responsibility terminology and everyday language, I take a more lenient stance and use the term fair or fairness also to refer to the outcomes of the other types of justification (where Rawls would probably prefer the term justified rather than fair; the same holds for the “appropriateness” of responsibility ascriptions, which he would probably judge in terms of being justified or not rather than being fair or not).

conception and fills out its justification by embedding it in his own comprehensive doctrine. This latter justification does not require adherence to liberalism.

Central in most liberal theories of justice is the notion of “public reason.” This holds for Rawls as well. Compared to, for example, deliberative democracy theorists—and Habermas in particular—Rawls has a restricted notion of public reason. Habermas, for example, defends a conception of public reason which includes all unofficial arenas of public discourse; these unofficial arenas in fact ground democratic self-government and political autonomy (McCarthy 1994:49). For Rawls, however, public reason is limited to the official institutions. Since his procedural approach to justice aims at “uncovering a public basis of justification on questions of political justice given the fact of reasonable pluralism,” it should proceed from “what is, or can be, held in common; and so [...] begin from shared fundamental ideas implicit in the public political culture in the hope of developing from them a political conception that can gain free and reasoned agreement in judgment” (Rawls 1993). Hence, the function of public reason is not so much to be critical but rather to be constructive. Public reason, therefore, needs to start from shared ideas and organize those into a political conception that can serve as the focus of an overlapping consensus, which in turn can enhance stability. Rawls connects his conception of reasonableness to T.M. Scanlon’s principle of moral motivation, which is one of the basic principles of contractualism (Scanlon 1982:104, 115). The principle tells us that we have a “basic desire to be able to justify our actions to others on grounds they could not reasonably reject” (Rawls 1993:49–50; fn 2).

Similar to deliberative approaches in Technology Assessment (TA), which are based on deliberative democracy procedural theory, Rawlsian concepts have also found their way to more applied contexts. Especially in the context of applied ethics, the tension between diverging moral frameworks is an urgent problem (e.g., how to sustain the conditions of the good life in a globalizing world (Dower 2004; Hardin 1999), or how to decide on issues related to abortion (Little 1999) or living organ donation (Hilhorst 2005)). Rawlsian approaches seem promising for answering these kinds of questions, since they offer a methodological alternative to the extreme positions of ethical generalism and (specified) principlism on the one hand and particularism on the other (Daniels 1996; St. John 2007; Van den Hoven 1997).⁶ Rawlsian justification avoids the drawbacks of both extremes, because it aims at coherence between the abstract theoretic principles and the more particular considered judgments without giving priority to any of them. As such Rawlsian approaches seem to offer a promising decision making procedure within applied

⁶ Proponents of the first category argue that applied ethics is essentially the application of general moral principles (Beauchamp and Childress 1994:112; Degrazia 1992; Lustig 1992) or theories (Gert et al. 1997; Hare 1988) to particular situations. This position is criticized for mistakenly assuming that valid principles can be formulated that govern all rational persons. Moreover, the critics argue, procedures for deducing answers to moral questions is impossible, unnecessary, and undesirable. These critics argue for situational adequacy, that is, an ideal of doing justice to persons in a particular historical context. The problem with particularism, on the other hand, is that it runs the risk of lacking moral justification. In most situations where ethical reflection is at stake, people should be able to justify their actions in terms of moral principles. However, if particularism is carried through to the extreme, it becomes difficult to provide public justification of moral judgments (Van den Hoven 1997:240–241).

ethics.⁷ Especially the concept of WRE seems an attractive method for real-life justification. Even without reference to political concepts as overlapping consensus, the notion of WRE can help explain why people consider certain things fair or unfair. Moreover, since the Rawlsian approach takes the different layers of morality explicitly into account, the approach seems to provide a powerful tool for encouraging reflection. The criticism that the Rawlsian procedural approach to justice requires that people share the tradition of liberalism does not seem valid. It is sufficient that people acknowledge that reasonable pluralism is the permanent condition and that the concept of reasonableness replaces that of moral truth. This is not the same as sharing the comprehensive view of liberalism. In a professional setting where people are motivated to work toward a fair distribution of responsibilities, this demand of “reasonableness” is probably a realistic one. McCarthy (1994) argues that it is a strength of Rawls’ theory that he allows different levels of abstraction. The more difficult it becomes to agree on general interests and shared values, the higher the level of abstraction of the overlapping consensus. However, it could also work the other way around; in case of responsibility distributions, people can disagree on the abstract levels of responsibility conceptions and principles, but agree on particular responsibility ascriptions.

In the next section, I develop this Rawlsian procedural approach further to assess the fairness of responsibility distributions.

3 Procedural fairness in responsibility distributions: two procedural norms

In their paper on reflective equilibrium in R&D networks, Van de Poel and Zwart (2010) derive two procedural norms that follow from applying the Rawlsian method of WRE to actual cases: reflective learning and inclusiveness. According to the authors, these norms, which are also used in the literature on policy and innovation networks, contribute to achieving a justified overlapping consensus. Before explaining the relation between these norms and the procedural approach, I first discuss the two norms in somewhat more detail.

3.1 Reflective learning

Since the last decades, several interactive and participatory methods have been proposed to successfully implement and develop new technologies (where successful is understood as “sustainable,” “responsible,” or some other desirable adjective). Most often these processes are shaped and evaluated in terms of the

⁷ In addition to this justificatory application, Rawlsian approaches are sometimes used in a constructive way as well. In the latter case, they are used as a framework for structuring discussion and debate, with the aim of coming to a justified agreement. The method could then be used, for example, as a *means* to attain a coherent basis for decision making in ethical committees or to gain support for particular decisions in the context of public policy (Holmgren 1987). This second way of applying Rawlsian approaches is comparable to the constructive application of deliberative approaches, albeit the Rawlsian ones take the moral background theories and principles more explicitly into account.

degree of learning experienced within the network or organization of relevant actors.

Most scholarly literature on learning goes back to the work of Fischer (1980, 1995) and Schön (1983). Fischer conceptualized his “levels of argumentation” (he does not refer to learning or reflection explicitly) within the context of policy making. Schön refers to the professions of engineering, architecture, management, psychotherapy, and town planning to show how professionals meet challenges by engaging in a process of “reflection-in-action.” A distinction is generally made between two levels of learning or reflection: lower-order versus higher-order discourse (Fischer 1980) or reflection (Schön 1983), single-loop versus double-loop learning (Argyris and Schön 1978; Sabatier and Jenkins-Smith 1993) or adaptive versus generative learning (Senge 1990). Although the contexts and the exact definitions differ, the distinction between the two types of learning in all cases is more or less similar. In the lower-order category, the learning process is a kind of technical or instrumental learning. It is reactive, short-term focused, within a context of fixed objectives (as applied to policy), a context of fixing new problems within the same problem definition and procedures (as applied to organization), or a context of technological design optimization (Brown et al. 2003; Hoogma et al. 2001). In the higher-order category of learning, the objectives, problem definitions and procedures are not tested but questioned and explored (Hoogma et al. 2001). It therefore involves the redefinition of policy goals and changes in norms and values (Brown et al. 2003). This higher-order learning is also more long-term focused. In the remainder of the text, I will use the term “reflective learning” to refer to these higher-order learning processes.

The effect of learning in organizations can be conceived as a threefold shift (Brown et al. 2003): (1) a shift in framing of the problem; (2) a shift in principle approaches to solving the problem and in weighing of choices between alternatives, and (3) a shift in the relationships among actors in a professional network as well as the broader sphere. It is especially this third shift (a shift in the relationships among actors) together with the object of reflective learning (appreciative systems and overarching theories) which makes reflective learning such an important phenomenon in the context of responsibility distributions. In the discussion of procedural justice, it was explained how WRE can be used to decide on issues in a context of reasonable pluralism (i.e., in a situation with diverse and competing interests). Reasonableness requires that people recognize the legitimacy of other actors in the network with other moral views. Lower-order learning occurs when people become aware of their position in the network and the possible differences in actor roles, agendas, perceptions, values, and interests among the actors. The awareness of these differences enhances the instrumental rationality of the actors in the sense they realize that the other actors enable or constrain the achievement of certain goals (Van de Poel and Zwart 2010:181). In case of reflective learning, actors are not only aware of these differences but they also recognize the *legitimacy* of these other views. Reflective learning therefore includes reflection on the desirable properties of the network as a whole. Additionally, it might help distinguishing between private and public values, that is, between arguments that are and that are not legitimate and important for an actor fulfilling a specific role in the network. Reflective learning

might thus contribute to achieving an overlapping consensus concerning a fair distribution of responsibilities among actors within a network displaying a large variety of value systems and background theories (ibid.).

3.2 Inclusiveness and openness

The second norm that Van de Poel and Zwart (2010) distinguish is “inclusiveness” or “openness,” which can be described as the norm that all relevant actors are included in a network. Van de Poel and Zwart explain which actors can be considered a relevant actor in terms of the Rawlsian criterion of public reason. Each actor that can legitimately claim to have a “reasonable stake” or a “reasonable interest,” where reasonableness means that it can be argued upon on the basis of public reasons, can be considered a relevant actor. Since this point of relevance will probably always be a point of debate, the authors add the criterion of openness, which serves to warrant the possibility that new aspects become relevant (p. 182).⁸ However, openness has an additional, more institutional feature. The criterion of openness calls for an open discourse, which means that it is not only important that all relevant actors are included, but that they have equal opportunities for participating in and contributing to the decision making process as well. If a group of actors with different fields and levels of expertise are engaged in a conversation, it is important that the vocabulary used by the experts is understandable to all. The criterion of openness also requires that people feel free to bring in unwelcome arguments. If some actors are discouraged to do so and remain silent, the overlapping consensus that is arrived at cannot be justified as being fair. Together, inclusiveness and openness determine when an overlapping consensus can be considered fair. They prevent “unjustified shortcuts to a wide reflective equilibrium or overlapping consensus” (ibid.). The latter could be the case when people with unwelcome arguments are excluded from the network.

Van de Poel and Zwart exert on explaining why this notion of *justified* overlapping consensus does not imply that they smuggle in some substantive notion of public reason. As explained in Sect. 2, critics of consensus theory (cf. Mouffe 1999, 2000; Young 1996, 2000) argue that, under the sway of deliberation, the goal of consensus can all too easily be equated with the interests of the powerful. Hence, we can understand that not any consensus is a democratic outcome. In other words, we cannot avoid introducing some criterion to distinguish a valid consensus from an invalid one. Although Young goes further (in that she doubts every instance of consensus), Rawls would probably agree that reference to consensus requires due care in order to distinguish it from a mere compromise or *modus vivendi* (Rawls 2001:191). In case of the latter, people come to an agreement on the basis of some negotiational process in which power relations and mutual dependencies play a crucial role. For the actors, the outcome may be a satisfactory one; they decide so on

⁸ This resembles the Habermasian understanding of justice as an ongoing exercise of political autonomy, which is always incomplete and subject to shifting historical circumstances (Habermas 1995:131). For Habermas, no conception of justice can ever be final and some questions should therefore explicitly be left open (p. 118). The composition of the network seems a plausible instance of such an “open” question.

the basis of pragmatic and sometimes prudential reasons. However, even if all actors agree, this does not equate such a bargained compromise with a morally justifiable consensus. The procedural criterion of inclusiveness and openness provides justificatory force to the consensus that is achieved in the network. The fact that this criterion is based on a certain notion of public reason is not so much problematic but rather an intrinsic element of the method. Managing pluralism requires a distinction between “valid” and “nonvalid” reasons, between “public” and “nonpublic” ones. To base the demarcation on a notion of public reason that others “could not reasonably reject”—to use Scanlon’s wording—seems a strength rather than a weakness.⁹

3.3 Relation between the two norms and fairness in responsibility distributions: sufficient or necessary conditions

With the two procedural norms described in the previous sections, we can now analyze whether these two norms are indeed beneficial to reconciling different responsibility conceptions. This requires a series of steps. The first is to see whether people can agree on a distribution of responsibilities and are able to give a *pro tanto* justification. If that is the case, we have achieved a consensus. The next step is then to see whether this distribution of responsibilities is also coherent with everyone’s individual conception of responsibility; in other words, whether it fits within each individual’s own WRE. If that is the case, we can speak of a *justified* overlapping consensus of the responsibility distribution.

Although Van de Poel and Zwart say that the two procedural norms are contributory to getting a justified overlapping consensus, their description of the norm of inclusiveness suggests that at least this norm is a necessary one (and not just contributory); without the norm of inclusiveness being fulfilled, no responsibility distribution can be justified as procedurally fair. However, although fulfilling this norm is necessary, it is probably not sufficient. People also have to recognize the legitimacy of other actors’ opinions and the need to justify their own standpoint in terms of public reason. To account for the latter, reflective learning processes may indeed be contributory. If there is a direct correlation between an agent’s responsibility conception and what she considers a “fair” responsibility distribution, reflective learning is not just contributory but even necessary. In the case described in the next section, I will analyze whether this correlation is indeed present.

⁹ In Sect. 2, I explained how Rawls’ interpretation of public reason differs from Habermas’ notion of public reason in that the former is more restricted. Since Rawls’ notion is assumed to be more *constructive* and Habermas’ notion more *reconstructive* (Habermas 1995:131), it is probably dependent on the field of application which interpretation could best be applied. In case of establishing a distribution of responsibilities that is justifiable to all actors involved, Rawls’ constructive notion seems more adequate. However, if one wants to organize participatory meetings in which deliberation serves to map out divergency in opinions, Habermas’ reconstructive notion seems more adequate.

4 Empirical findings

4.1 Case description

In this section, I briefly discuss a case study covering the development of a prototype application for in-house monitoring of patients, based on Ambient Intelligence (AmI) technology.¹⁰ This project was studied as part of an ethical parallel study (see Van der Burg (2009) for a description of this kind of ethical research). The aim of ethical parallel research is to carry out ethical investigations parallel to, and in close cooperation with, a specific technological R&D project. The R&D project described here is carried out by a consortium of 12 Small and Medium Enterprises (SME), several universities, two independent industrial research institutes and a scientific research center in rehabilitation technology.¹¹ In the project, a use case is developed to serve as an example of what can be done with this technology and to focus the work of the demonstration activities of the project. The use case describes a situation of in-house monitoring of the daily activities of a patient with Chronic Obstructive Pulmonary Disease (COPD), a chronic lung disease. In the project, end users, including health care professionals, are consulted to clarify their wishes and demands with respect to the monitoring application to be created. After a first experimental set-up of the application, explorative experiments with real users will be carried out to determine its functional and technical requirements in more detail. Afterward the experimental application will be evaluated both in terms of the technical specifications and in terms of the objectives set to improve quality of life of the end users.

In the original research proposal, the technical researchers identified the social acceptance of the currently developed technology as a crucial element of the success of the project.¹² The main focus of the author's ethical investigations was therefore on the necessary conditions for getting the technology socially accepted. On the basis of a series of interviews with 13 representatives of the different institutional partners involved in the project, a list of "moral issues" was identified (see Table 1). The interviewees were asked to think of "moral issue" in as broad a way as possible: anything related to risks and moral values (e.g., social acceptance, human well-being, privacy, society, and sustainability) was considered relevant.¹³

¹⁰ Ambient Intelligence reflects a vision of the future of ICT in which intelligence is embedded in virtually everything around us, such as clothes, furniture, etc. The technology consists of Wireless Sensor Networks (WSN), the combination of body sensors, ambient sensors and wireless networks.

¹¹ For a more elaborate description of the project, including the results of the ethical investigations, the reader is referred to (Doorn forthcoming). The project started in December 2007 and was originally planned to run till November 2010, but the end date is now extended till November 2011.

¹² Although the term "social acceptance" suggests a strategic or prudential rather than moral intention, in the interviews the technical researchers interpreted the term "acceptance" as referring to both *acceptance* and *acceptability*. In the remainder I use the term to refer to this broad interpretation of social acceptance.

¹³ I realize that this description of moral issue is not as well-defined as some philosophers would like it to be. However, since the interviews and the workshop were explicitly aimed at tracing the opinions of the engineers themselves, I did not give any constraints on what counts as a moral issue nor did I introduce issues that were not mentioned by the engineers themselves. For a more well-wrought description of when a value can be considered a *moral* value, see Nagel 1979: Chapter Nine: The fragmentation of value.

Table 1 Moral issues related to social acceptance

Moral issues
Making sure that the application does not interfere with everyday life (invisibility of technology)
Setting the requirements of the security of this applications (how secure is secure enough?)
Striking the right balance between user friendliness, reliability, and functionality
Making sure that end users (patients, their family & friends, and clinicians) are able and willing to use the application
Starting a broad societal discussion about the desirability of these kinds of (monitoring) applications
Addressing questions related to data storage and data access (legal aspects)
Inventorying/monitoring potential risks of the present application
Identify how technological choices affect the social acceptance

According to the technological researchers, these issues should be addressed in order to gain social acceptance. Subsequently, a workshop was organized in which the issues were discussed in more detail. This workshop was organized in the university's *Group Decision Room* (GDR, an electronic brainstorming facility that allows for anonymous discussion and voting). This facility was chosen to fulfill the criterion of powerless discussion and equal voice for all, which is central to the procedural approach. The aim of the workshop was to trace the different rationales for distributing the responsibility for addressing the moral issues. At the start of the workshop, responsibility was defined as “the task to see to it that X,” where X could refer to any of the moral issues. In the remainder of the text, I use the term “moral task” for the responsibility to address particular moral issues.

The workshop was structured along the lines of the WRE approach to encourage reflection on the different layers of morality (considered judgments, principles and moral background theories) in the hope that this would facilitate learning processes as well. Table 2 shows a summary of the empirical findings [see (Doorn forthcoming) for a detailed presentation of the results]. The eight rows correspond to the eight workshop participants. The moral background theories of each participant (Column 2 in Table 2) were traced on the basis of the Ethical Position Questionnaire (EPQ), a psychometric scale to measure ethical ideologies (Forsyth 1980; Forsyth et al. 1988).¹⁴ The participants were asked to distribute the “moral tasks” over the different project activities. It was also possible to say that something

¹⁴ These ideologies indicate the background considerations underlying moral deliberation, classified along the two dimensions universalism and idealism. The first dimension refers to the extent to which individuals reject universal moral rules in favor of relativism. The second dimension refers to the degree to which individuals are idealistic or pragmatic in their attitude toward the consequences of actions. On the basis of Likert scale responses to 20 statements, respondents were classified into one of the four ideological categories without the need for interpretation by the interviewer. These categories are situationism, absolutism, subjectivism and exceptionism. Situationists share with subjectivists a low score on the universalism dimension (and similarly, absolutists and exceptionists share a high score); comparably, subjectivists and exceptionists have a low score on the idealism dimension, whereas situationists and absolutists share a high score on this dimension.

Table 2 Summary of empirical findings of the workshop

Actor	EPQ typology	Type of argumentation	Project activity primarily responsible
1	Absolutist/situationist	Fairness (workload); workplace relations	Clinical experimentation
2	Subjectivist	Goal-directed; efficacy	Project management
3	Situationist	User perspective; societal; efficacy ("getting things done")	Clinical experimentation
4	Absolutist/situationist	Societal; user perspective; fairness (workload)	Project management/outside project
5	Absolutist	Fairness (workload)	Research on software
6	Absolutist/exceptionist	Fairness (workload); user perspective	Clinical experimentation
7	Absolutist/situationist	Fairness (workload)	Clinical experimentation
8	Situationist	User perspective; goal-directed	Project management/clinical experimentation

was beyond the scope of the project ("outside project").¹⁵ This distributing exercise was done twice with a discussion in between in order to assess whether the participants converged to a common opinion in the course of the workshop. In addition, the different participants' rationales for distributing responsibilities were traced on the basis of a discussion about conditions for responsibility (Column 3). The rationales are described in terms of recurring arguments that were used by the participants to make their case. Column 4 shows the activity that was mentioned most as being primarily responsible for each of the moral issues (this column shows the aggregated results of the second distribution round only). Afterward, the participants were asked whether the final distribution of responsibilities was "fair."

4.2 Discussion

When analyzing the empirical results, we have to keep in mind that several things run together. First, the ethical parallel research itself probably has some effect on the way the research is carried out and how the different responsibilities are distributed. The technical researchers are probably more attentive to moral issues due to the presence of an ethicist at their project meetings. Secondly, the workshop was structured along the lines of the Rawlsian WRE approach so that the different elements in the workshop were not only used to *assess* the individuals' moral opinions but also to *encourage reflection* (see also note eight on the dual use of Rawlsian approaches). When we try to analyze the resulting distribution of responsibilities in terms of the Rawlsian procedural framework and try to see whether this approach did indeed reconcile the tension between the different conceptions of responsibility, it is somewhat difficult to separate the effect of the workshop itself from the effect of the procedural approach. However,

¹⁵ In order to avoid a discussion on a too personal level ("you should have done that!") we used the more neutral terms project "activities" or "phases" as the organizational entities to ascribe responsibility to.

notwithstanding these multiple effects, we can still derive some interesting points from the ethical parallel research and the workshop.

First, the workshop prompted discussion on the distribution of responsibilities in the project. In their evaluation of the workshop, most participants indicated that they had become more aware of certain moral issues (e.g., the need to involve end users). There was a general agreement that most moral issues span several activities within the project and that it is therefore difficult to single out one activity where it should primarily be addressed. The primary responsibility was in those cases ascribed to the project management for coordinating this joint effort, to the experimentation phase where all activities were supposed to come together, or to the clinical partner. Some participants explicitly mentioned that this workshop made them realize that some moral issues were currently not addressed adequately. The idea that the work should shift from research toward either laboratory or clinical experiments with a (prototype) application was shared by all. Soon after the workshop, a brainstorm meeting was scheduled in which the requirements for clinical experimentation were discussed in more detail. Hence, one effect of the workshop was certainly to pay more attention to the end users and to involve them in the research.

Secondly, although the participants endorsed rather different conceptions of responsibility with different foci (consequences, fairness, tasks, duties, professionalism), they tended to be sensitive to one another's arguments. Although it proved difficult to attain consensus on all points, the opinions of the different participants tended to converge between both "distributing exercises" (remember that the participants were asked to distribute the responsibilities twice, with a discussion in between). Whereas the first distribution of responsibilities showed a significant scatter of tasks over different project activities and partners, the second distribution showed more responsibility for the project management and the clinical partners. Since all discussions and responsibility ascriptions were done anonymously, this can be considered a genuine convergence and not the result of group pressure. The participants were also asked about the fairness of the resulting distribution of responsibilities. Interestingly, although the participants perceived the end result in rather different ways, they all seem to interpret the end result more or less as a consensus on how the responsibilities are to be distributed. Some interpreted the outcome of the workshop as the insight that the "ethics" of the project is, in the end, a joint effort, whereas others interpreted it as primarily a responsibility of the clinical partners or the project management to *coordinate* this joint effort. However, all participants agreed that, in the end, all project members should have a commitment to the project as a whole (including the moral aspects).

Thirdly, when asked whether the workshop would affect the work in the project, most participants indicated that it would indeed have implications for their work, though for some only minor ones. All participants expected a shift in focus from research toward either laboratory or clinical experiments with an (prototype) application. One participant expected that the enduring impact of the workshop would be to make more explicit what the project in fact aims for. Before the workshop took place, the goal of the project was still rather ill defined. Additionally, the opinions on what is part of the project became clearer and also more inclusive. Some researchers initially considered most moral issues as being beyond the scope

of the present project. However, during the discussion and in the second “distributing exercise,” most issues were included in the scope of the project, with a central role for the project management.

When we assess the project in terms of the two procedural criteria developed by Van de Poel and Zwart, we can identify the following points. First, both levels of learning seem to occur. The various participants’ remark that they became more aware of ethical issues is a clear sign of first-order learning. However, the discussions indicate that this workshop prompted second-order learning processes as well. Some senior participants worried about the fairness of the load for the PhD and postdoctoral researchers, which indicates an openness to other people’s interests. Moreover, the emphasis that the work requires a *joint* effort, spanning all the project activities, also points to (second-order) reflective learning processes. Lastly, the fact that the problem definition itself became object of discussion is also an indication of reflective learning.

In terms of inclusiveness, the project clearly aims to be inclusive. It was deliberately chosen to include a clinical partner in the project as well, herewith attempting to make the project more than just a technological project. However, the cooperation between the technical partners and the clinical partner proved difficult in practice. During the workshop, it was also mentioned that the user involvement was in fact rather weak. In that sense, the project was less inclusive than aimed for at the start. However, soon after the workshop, more tangible attempts were made to include end users. Since the researchers sincerely aimed at openness and inclusiveness and since they did not raise formal obstacles for including more people, we can conclude that this criterion is, at least partly, fulfilled.

What does the foregoing learn us about the necessity of the two procedural norms: Are these norms indeed required? Regarding inclusiveness, the answer is obviously yes. If the criterion of inclusiveness is released, the method loses its justificatory force. In practice, it will be difficult to involve all relevant people in the decision making directly. However, in a case such as the current project, the interests of those people that are affected by the technology should at least be represented. If we look at the end users, for example, it is important that their interests are looked after. Even though they do not have to be involved in the actual division of labor, the ultimate division of labor should include the task to look after their interests. So, though indirectly, they should be included or represented in the decision making process.

The second norm is learning. During the workshop, it was investigated to what extent the moral background theories (Column 2 in Table 2) were predictive for the actual distributions of responsibility (Column 4 in Table 2). The empirical findings of the case suggest that there is no correlation between these two “layers of morality.” People with similar moral background theories might come to different responsibility distributions, and people with different moral background theories might come to similar responsibility distributions. This suggests that reflective learning (here, a willingness to change one’s moral background theory) is not required to come to a similar distribution of responsibilities. However, without reflective learning, people will probably not recognize the legitimacy of other people’s arguments in the first place. So, reflective learning is probably still required

to agree on the possibility and legitimacy of disagreement. People do not have to change their own conception of what responsibility amounts to, but they do have to acknowledge that their conception is one among many. In the empirical case, reflective learning processes were present, especially in the discussion of the fairness of responsibility ascriptions. It is questionable whether the outcome would have converged as it did now, without these reflective learning processes. This shows that both norms are indeed beneficial for getting a justified overlapping consensus and that the norm of inclusiveness is also required.

5 Concluding remarks

In this paper, I developed a procedure for distributing responsibilities based on Rawls' political liberalism. The procedural model was applied to a technological project that is currently being carried out. This project was studied as part of an ethical parallel study. An interactive workshop was organized to discuss the responsibilities for moral issues in the project. During the workshop, it appeared that the team members endorse a large variety of responsibility conceptions and rationales for distributing them.

The case shows that, in a pluralist setting, a procedural approach can be useful for prompting discussion on the legitimacy of the different conceptions and the question what a fair distribution of responsibilities amounts to. Although a full overlapping consensus regarding the distribution of responsibilities is probably too demanding, the case shows that the tension between the different conceptions can be alleviated by structuring the discussion along the lines of the different layers of the Rawlsian WRE approach, because this encourages participants to think in terms of "fair" workload and the legitimacy of other people's arguments. Although some differences in opinion remained, the effect of the workshop was that the work became more focused and that certain moral issues that were until then not recognized became part of the work. The two procedural norms (reflective learning and inclusiveness), as proposed by Van de Poel and Zwart, were both (partly) fulfilled.

Three points deserve further investigation. First, because the workshop was structured along the lines of the WRE approach, it is difficult to assess whether it is the workshop itself or the "procedural approach" that encourages reflection and alleviate the tension between the different responsibility conceptions. If the workshop was structured in a different way, not focusing on the different layers of morality, would the result have been the same? This question cannot be answered on the basis of this single case alone. Related to this point is the question whether the method should be applied in its full justificatory function or mainly as a constructive approach. Both questions need further research.

Secondly, the present case does neither confirm nor refute that (higher-order) reflective learning processes are indeed indispensable for recognizing the legitimacy of other people's conceptions. Reflective learning proved, strictly speaking, not a necessary condition: it may be theoretically possible to think of a situation where people commit to reasonable pluralism without any instance of reflective learning.

However, in practice it is highly unlikely that people will recognize the legitimacy of other people's responsibility conceptions in the absence of reflective learning processes. Hence, although reflective learning is not logically necessary, in practice it probably *is* required.

Thirdly, due to the divergent interpretations of the final distribution of responsibilities, this final distribution cannot straightforwardly be interpreted in terms of an overlapping consensus or in terms of individual WREs. In that sense, it is maybe somewhat artificial to talk about “procedural justice” in this context. The workshop did not explicitly derive or discuss procedural justice or cooperation norms. However, the fairness of responsibility distributions was explicitly discussed, including the question whether the final responsibility distribution could be considered fair. Together this seems a first step to deriving procedural justice norms.

More studies are needed for further developing the present approach to discuss responsibility. Remaining questions are the role of reflective learning processes and the different aims of the approach. My hypothesis is that the more challenging the moral disagreements are, the more important these reflective learning processes become and the more important it becomes to systematically touch upon the different layers of morality. Alternatively, a discussion might easily arrive at an impasse in which opposing opinions are merely expressed rather than being listened to.

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