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RESEARCH ARTICLE

A social contract approach to sustainability

Giuseppe Danese[1]

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Abstract This paper asks whether it is possible to derive a concern for future generations ("sustainability") from an account of the firm as a social contract (SC) among its stakeholders. Two aspects of a leading SC model of the firm limit its usefulness for an analysis of sustainability. First, the stakeholders provide investments to the firm over time. Second, the relationship between contemporaries and future generations is marked by asymmetries of power and knowledge that need to be considered while reconstructing the SC today. I discuss three reformulations of the SC that are all, in principle, capable of introducing within the SC a concern for future generations. The first describes the contractors as heads of families. The second envisages a grand meeting of stakeholders of all generations. The third, which I find most defensible, views the SC as an ahistorical agreement reached behind a thick veil of ignorance. This agreement is based on John Rawls's norm of reciprocity, whereby the stakeholders adopt today the decision they wish all previous (and future) generations had made regarding the rate of consumption of natural resources and emission of pollutants.

Keywords Social contract · Sustainability · Reciprocity · Future generations · John Rawls

JEL Classification M14 · O16 · Q01

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✉ Giuseppe Danese
gdanese@porto.ucp.pt

[1] Católica Porto Business School and CEGE, Universidade Católica Portuguesa, Rua Diogo Botelho 1327, 4169-005 Porto, Portugal

1 Introduction

The modern large business company has gained importance as a major emitter of pollutants and user of natural resources. Heede (2014) finds that 90 companies (50 of which investor-owned and the rest under state control) caused 63% of human-made emissions between 1751 and 2010. About half of these emissions were produced since 1986, a clear sign that companies are increasingly responsible for emissions. James Gustave Speth aptly remarked that: “If capitalism is a growth machine, corporations are doing the growing. If growth is destroying the environment, then corporations are doing most of the destroying” (Speth 2008, p. 165). The firm’s role as polluter and user of natural resources is an instance of its ability to make an impact on the rights and welfare of a variety of groups and individuals, the “stakeholders” of the firm.[1] The term *sustainability* (cf. WCED 1987) refers to the need to ensure that current decisions by individuals and organizations regarding emissions and use of natural resources will not have a negative impact on the welfare of future generations. Sustainability is a topic that has attracted a large body of research in business studies (cf. e.g., Fox et al. 2010; Steurer et al. 2005; DesJardins 1998; Jeurissen and Keijzers 2004; Shrivastava 1995) as well as in economics (cf. the essays in Roemer and Suzumura 2007 and Endres 2010, Part 6).

While trying to articulate their obligations to the stakeholders of the firm, present and future, managers might find themselves locked in a moral dilemma about the effect of any decision they make on some category (cf. Jensen 2001). Social contract[2] models in business ethics and economics have emerged as a possible answer to this problem. The two most influential models of the social contract of the stakeholders, Sacconi (2006) and Donaldson and Dunfee (1999), do not explicitly address, however, the problem of the firm’s obligations to future generations. This paper hopes to fill this gap by analyzing three reformulations of the social contract. The first views the stakeholders as heads of families concerned with their progeny. The second views the social contract as the result of a grand meeting of stakeholders from all generations. The third, which I find most defensible, views the social contract as the result of a hypothetical meeting of current stakeholders, who adopt a thick veil of ignorance.

This paper proceeds as follows. In Sect. 2 I briefly review a leading social contract account of the firm, Lorenzo Sacconi’s. I focus on this model because it incorporates a bargaining problem among the stakeholders from which an objective for the firm is derived. I then offer an assessment of this objective from the point of view of the sustainability agenda. After having argued that the model’s usefulness is limited in this regard, I move to possible amendments to the SC (Sect. 3). I then

[1] A stakeholder is any “identifiable group or individual who can affect the achievement of an organization’s objectives or who is affected by the achievement of an organization’s objective” (Freeman and Reed 1983, p. 91).

[2] I use in the paper the term “social contract” instead of “contractarianism” and “contractualism” (Barry 1989), often found in the literature. Contractarianism is the brand of social contract ethics associated with the idea of a mutually advantageous agreement. Contractualism is the brand stressing instead the impartiality of the agreement. I return to this distinction in Sect. 4.

discuss in greater details the notion of reciprocity, which is central to one of the proposals. Final remarks follow.

2 The SC of the current stakeholders

In works that have spanned a decade, Lorenzo Sacconi has developed a social contract approach to the problem of choice regarding the governance structure and the objective of the firm (cf. especially Sacconi 2006, 2007, also Mansell 2013 and Francés-Gómez and Del Rio 2008). I focus on the implications of Sacconi's model for the future generations, with no hope to make justice to the full scope of Sacconi's analysis.

Sacconi's SC is specified in two steps. The first social contract is a hypothetical bargaining situation among the stakeholders where force and fraud are not allowed, and every stakeholder can drop out in case the agreement leaves him/her worse off than the status quo. The first SC is a constitutional-level agreement among the stakeholders to setup a generic "union," once the stakeholders recognize that cooperation with each other is beneficial. The second SC is an agreement about who will run the firm. This agreement also contains provisions regarding the appropriate corporate objective function for a multi-stakeholder organization, which must be per the solution to the bargaining game in the first step. In the second step, all stakeholders agree to accept the authority of the shareholders, or of the directors the shareholders appoint, if the shareholders commit to pursue an enlarged objective for the firm:

1. The paramount objective is to refrain from activities that generate negative externalities on individuals or groups that do not directly participate in the dealings of the firm. If the negative externalities are "essential for the production of the cooperative surplus" (Sacconi 2006, p. 275), appropriate forms of compensation need to be devised so that the external parties remain *ex post* "neutral."
2. In second order, the shareholders or their appointees ought to formulate corporate policies that distribute the surplus produced by the firm in an equitable manner, according to the solution to the bargaining problem in the first SC.
3. Within the subset of options for the firm that survive the first two headings, the shareholders will seek maximum remuneration of their investment.

Those who do not participate in the transactions of the firm, but still face negative consequences because of its activities, are among the weakest of the stakeholders. In the absence of the elimination of these externalities, or of compensation for them, these categories will bear costs without receiving any benefit. The first heading of the objective function tries to create safeguards for these groups.

2.1 Some open questions in Sacconi's model

Time is a dimension that is often absent from SC accounts (cf. Attas 2008; also Arenas and Rodrigo 2016 who talk about "presentism"). A question that is left open in Sacconi's model is whether future generations participate in the formation of the first social contract. This seems not be the case. To be consistent with a meaningful idea of "bargaining," the first SC needs to be an assembly of contemporaneous stakeholders. If, instead, it were the case that future generations of stakeholders participated in the formation of the hypothetical agreement, this would open the door to a set of questions that also deserve attention. The second heading of the objective function, asking managers to maximize and divide equitably the cooperative surplus, would now imply maximizing and distributing the (expected) sum of the present as well as future surpluses, a summation that would have to be truncated either by assuming a finite number of generations, or a discount rate. Both issues, i.e., how many generations we are willing to consider and discounting, are moral questions in themselves, and they have been discussed extensively in the sustainability literature (cf. e.g., Asheim 2010 and Stern 2007).

Sacconi's analysis seems to imply, therefore, that the SC is reached among coeval stakeholders. The assumption of coevality has implications for the future generations. If it is common knowledge among the stakeholders that all of them belong to the same generation, it would then be optimal to decide to exploit all resources available today, leaving no form of capital, natural or otherwise, for tomorrow (de Shalit 1995, p. 96), provided that the contractors are not endowed with a preexisting concern for future generations. One might point out that the stakeholders might belong to different age groups, or might envision becoming old if they are currently young, a point raised by English (1977) and Gauthier (1986). Each contractor would then maximize welfare over the entire expected lifespan, not knowing whether one will be "young," "middle-aged" or "elderly." This approach has, however, the undesirable implication that we should only save for the duration of a reasonable life. This approach to sustainability is, therefore, unhelpful in addressing the consequences of our actions on faraway generations.

A further issue is, if the production of an externality is "essential" from the point of view of the current generation (cf. Sacconi 2006, p. 275), is it justifiable and possible to look for a form of compensation that will render future generations neutral? The current generation is likely to face a moral dilemma in this regard, considering the difficulty in attributing preferences and tastes to future generations. Barry (1977, p. 273) was among the first to notice that the relationship between the contemporaries and future generations is characterized by an asymmetry of knowledge and power. The current generation may not wish to impose preferences on future generations of stakeholders, as we are unable to empathize with them fully. To mitigate the asymmetry of knowledge, we might opt at the societal level for a nondeclining stock of natural resources. This would meet Barry's suggestion that "we don't know what the precise tastes of our remote descendants will be, but they are unlikely to include a desire for skin cancer, soil erosion [...] And, other things being equal, the interests of future generations cannot be harmed by our leaving them more choices rather than fewer" (*id*, p. 247). In a recent contribution, critical of Richard DeGeorge's claim that "what does not exist now cannot now have rights in any strong sense" (cited in Nickel 2015, p. 720), Nickel (2015) presents a compelling case for the rights of future persons, claiming that we can come up with a set of duties, albeit "imperfect" ones, asking us not to bequeath to the next generations a planet in severely depleted conditions (cf. also Tremmel 2009, pp. 47–63). The asymmetry of knowledge between today's generation and the future generations cannot be used by the stakeholders, therefore, as the theoretical backdrop that would allow the use of unsustainable corporate practices today.

The asymmetry of power between the current generation of stakeholders and the future generations of stakeholders of the same firm can be made more explicit by looking at the interdependence between the bargaining problem among the stakeholders today and the bargaining problem among stakeholders in the future:[3]

1. The solution to the bargaining problem among today's stakeholders depends on the "disagreement point," the utility that the ideal contractors obtain if they fail to reach an agreement. This "reservation utility" is not guaranteed to be always the same over time, due to historical and technological considerations. The state of the physical environment also influences the location of the disagreement point in the utility space within which a solution to the bargaining game among the stakeholders is found in Sacconi's first SC.
2. The utility space might shrink because of environmental damage and anthropogenic climate change in particular (cf. e.g., Stern 2007). This consideration does not necessarily imply that some duty exists upon the contemporaries to keep the bargaining space constant over time, an operation that might well turn out to be impossible due, e.g., to technological change and population increases. The effect of current decisions on the shape of the future generations' bargaining space is an exemplification of the asymmetric power of the present generation to interfere with posterity.

It is hopefully clear at this point that the SC in one of its most advanced available formulations does not provide sufficient guidance to managers regarding the treatment of future generations of stakeholders. Decisions taken per the SC will imply certain levels of emission of pollutants and use of natural resources. *In short, the social contract of (today's) stakeholders has an ecological footprint.*[4] The inadequacy of the current formulation of the SC in addressing the problem of our duties to posterity is most likely due to two specific aspects deserving further study. The first is the interdependence between the bargaining among the contemporaries

[3] An alternative approach would be to consider a grand bargaining game including representatives of all generations. I discuss this problematic possibility in the next section.

[4] An operational definition of ecological footprint is "the aggregate area of land and water [...] that is claimed by participants in the economy to produce all the resources they consume, and to absorb all the wastes they generate on a continuing basis, using prevailing technology" (Wackernagel and Rees 1997, p. 7). Hart (1995) discusses the notion of "management of the organizational ecological footprint," instances of which are pollution prevention ("minimize emissions, effluents and waste," p. 992), product stewardship (guidance as to the "selection of raw materials and [...] product design with the objective of minimizing the environmental impact of product systems," p. 996) and "sustainable development," defined here as "minimizing the environmental burden of firm growth and development" (p. 992).

and the bargaining within each future generation I have briefly discussed above. The second relates to the view of the firm that underlies Sacconi's SC, i.e., a nexus of specific investments provided once and for all (cf. Grossman and Hart 1986). Firms seem, however, closer to being a *stream* of investments provided by different generations of stakeholders. The Delaware General Corporation Law at section 122 states that a corporation has: "perpetual succession by its corporate name, unless a limited period of duration is stated in its certificate of incorporation," a sign that corporate law typically defaults corporations to no pre-defined duration. In practice firms do not last forever as a result, among other causes, of shifting market conditions and managerial mistakes. Setting a deadline for the company's activities seems, however, impractical, and possibly illegal. Social contract models of the firm need to meet the challenge of the firm's perduration in time.

3 The amended SC

In this section, I discuss three possible reformulations of the first SC. All these reformulations are, in theory, capable of generating obligations to future generations, through different theoretical approaches. I evaluate each reformulation of the SC according to two criteria.

The first criterion asks that any reformulation of the SC be coherent with the hypothetical agreement methodology of SC ethics (cf. Van Oosterhout et al. 2006), based on the fictitious constructs of the "original position" and of the "veil of ignorance" proposed by Rawls (1971). These devices are meant to help men and women discover which theory of justice "specifies the most appropriate principles for realizing liberty and equality once society is viewed as a fair system of cooperation between free and equal citizens"(Rawls 2005, p. 22). These principles shape what Rawls calls the *basic structure* of society, i.e., "a society's main political, social and economic institutions and how they fit together into one unified system of social cooperation from one generation to the next" (Rawls 2005, p. 11). The first SC described by Sacconi is an application of Rawls's original position to the problem of how corporate governance ensures an equitable treatment of the stakeholders. The implicit, and controversial, assumption of this approach is that corporate governance is an institution of the basic structure of society (cf. also Blanc and Al-Amoudi 2013 and, *contra*, Singer 2015).

Rawls noticed that the time dimension "subjects any ethical theory to severe if not impossible tests" (Rawls 1971, p. 251). Overcoming "positional limitations" (a concept discussed in Sen 2011, p. 155–173) in the original position appears challenging in the case of choices that involve several agents living at the same time; it seems an even harder exercise in the case of decisions that produce effects on future generations, such as the decisions about emission levels and the use of natural resources. To ease this challenge, the second criterion asks that the amended SC be "representable" by those who are granted decision-making power in the firm. In the words of Rawls, the original position is a "device of representation" (cf. Rawls 2005, p. 27) rather than a physical place. The simulation that the decision makers need to engage in needs to contain enough details to allow managers to set apart those decisions about corporate policy that fulfill the terms of the hypothetical contract from those that do not. This criterion essentially tries to ensure that any reformulation of the SC will be of potential practical relevance for the corporate decision makers.

3.1 Proposal 1: contractors as heads of families

In this version of the SC the contractors are good family men (or women) who take an interest in their offspring, an approach pioneered by John Rawls in *A Theory of Justice* (abbreviated as the *Theory*). In the *Theory* Rawls asks whether the contractors in the original position "have obligations and duties to third parties, for example, to their immediate descendants" (Rawls 1971, p. 111), a point I have already discussed in relation to the implicit assumption of coevality in Sacconi's first SC. To cope with this difficulty, Rawls argues that the decision makers in the original position care about their immediate successors, behaving as family lines:

> We can adopt a motivation assumption and think of the parties as representing a continuing line of claims. For example, we can assume that they are heads of families and therefore have a desire to further the well-being of at least their more immediate descendants (Rawls 1971, p. 111).

The norm that summarizes this reformulation of the SC is:

Norm 1 Choose regarding the rate of consumption of natural resources and the rate of emissions as a good family man (or woman) would.

The family line assumption has been criticized as ad hoc to justify our caring for posterity.[5] The assumption implies lifting the veil of ignorance (in violation of the first criterion of evaluation) to find out that one has a progeny, a feature that must be common knowledge among the contractors if the bargaining is to be carried out among equals. Even assuming a general caring for one's descendants, the extent of this caring appears bound to decline as we look further into the future of humanity.

3.2 Proposal 2: grand assembly of all contractors

In this alternative reformulation of the SC all the stakeholders belonging to all generations of human history, past, present and future, meet in the original position. To be coherent with the original position methodology, each contractor should not know to which particular generation he/she belongs to, provided that it is common knowledge that all generations are in fact represented. Barry (1977) proposed this argument in response to Rawls's analysis in the *Theory*.

The agreement, once reached, appears to have a strong moral legitimation, i.e., the consent of all generations. The norm that is implied by this contract is:

[5] Rawls himself recognized this in *Political Liberalism* (Rawls 2005, p. 20–21).

Norm 2 Choose regarding the rate of consumption of natural resources and the rate of emissions in such a way that the representatives of all generations would consent to.[6]

Once the first SC is described as a grand gathering of stakeholders from all generations, the first heading of Sacconi's corporate objective function would require that managers refrain from producing externalities that negatively affect individuals or groups from the present and the future, or that appropriate compensation be paid to such parties. The second heading would ask managers to give equitable remuneration to the stakeholders of all ages. The third would ask the managers to maximize the payoff of the shareholders, possibly only the present ones. It is unlikely that anybody would be able to simulate any such situation, and carry out the moral duties that descend from it, in violation of the second criterion of evaluation. The simulation exercise could be simplified by restricting attention to a finite and short number of future generations of stakeholders. The choice of where to draw the line, i.e., how many generations we are willing to consider, seems, however, arbitrary.

3.3 Proposal 3: an ahistorical SC

In this reformulation, the contractors have no information on the stock of natural assets and productive resources available to them when deliberating in the original position. This "ahistorical" (or nonhistorical) SC was originally proposed in Rawls's *Political Liberalism* (Rawls 2005), the last and definitive statement of Rawls's social contract ethics. The practice of oblivion of one's characteristics (gender, age, income, etc.) in the original position extends easily to the amount of natural resources in one's availability. Rawls viewed all these contingencies as the result of a historical accident. True impartiality requires the neglect of all contingencies: the veil of ignorance is supposed to be *thick*, rather than thin, i.e., the parties are to conceive of each other only as moral beings, in a sort of "deliberative vacuum" (Rawls 2005, p. 273).

Rawls points out that the norm of behavior that is singled out in the ahistorical SC is the norm of *reciprocity* (cf. Sect. 4), which can be summarized as follows:

Norm 3 Choose regarding the rate of consumption of natural resources and the rate of emissions in the same way you wish all previous and future generations of stakeholders had.

Rawls introduces reciprocity as the principle:

> which the members of any generation (and so all generations) would adopt as the one their generation is to follow and as the principle they would want preceding generations to have followed (and later generations to follow), no matter how far back (or forward) in time (Rawls 2005, p. 274).

[6] It remains unclear whether the assembly should include all the *actual* generations, or both the actual and the hypothetical generations (cf. Pontara 1995, pp. 81–89). The inclusion of hypothetical generations seems, however, to make the simulation exercise even more complex.

In this reformulation of the SC, considerations related to the time in which the contractors enter the original position, as well as to the presence of representatives of past and future generations, all lose relevance thanks to the "thick" veil of ignorance the contractors assume.

This reformulation is fully compatible with the general rational bargaining methodology (the first criterion), blinding the contractors to a bigger set of personal features. It also seems clear in the exercise it asks the managers to carry out, i.e. the simulation of a hypothetical, voluntary bargaining situation among stakeholders that are blinded to their features and circumstances.

The "ahistorical" nature of the contract does not imply that it must endure across generations unchanged, in a way that precludes the contractors from using any new information or scientific discovery. Rather, given that the original position is a device of representation, the ahistorical contract reached by each generation of contractors will necessarily all imply a rate of use of natural resources and of emissions that is free from temporal biases. Each generation will be constrained in its decisions by the available knowledge about the way economic activities interact with physical phenomena and by the impossibility to know for how many generations the firm will survive, because of changes in demand, technology and other random shocks in the wider economy.

In the next section, I discuss in greater details the Rawlsian notion of "reciprocity" that is key to the ahistorical SC.

4 Reciprocity among generations

The term reciprocity captures an intuition often found in ancient texts and the Scriptures according to which we should "Do unto others as you would have them do unto you". The term has found application in the field of behavioral economics to describe the behavior observed in experiments where simple transfers of monetary amounts are involved, such as in the "trust" game or the "ultimatum" game (cf. Fehr and Schmidt 2006 for a survey of the literature). Falk and Fischbacher (2006) define reciprocity as the behavioral response to anticipated acts of kindness or unkindness of other people. Studies have typically found that intentions seem only to matter when they come from a human, as opposed to a computerized random chooser (cf. e.g., Blount 1995). An early study using fMRI (functional magnetic resonance imaging) to study behavior in the repeated Prisoners' Dilemma found that subjects playing against another human activate a richer set of areas of the brain compared to the areas activated in subjects playing against a computer (Rilling et al. 2002).

If we adopt the definition of reciprocity of Falk and Fischbacher (2006), which is close to the popular understanding of the term, there seems to be hardly any space for reciprocity between contemporaries and posterity. Postma (2002) and de Shalit (1995, pp. 87–111) notice that the inability of posterity to reciprocate the contemporaries' actions renders reciprocity, and Rawls's theory of intergenerational justice altogether, unhelpful as an ethical basis for sustainability.[7]

Rawls's use of the term reciprocity is, however, quite different from the common understanding of what this term means, granting a further discussion in this section of this term. In Rawls's *Political Liberalism* reciprocity assumes a distinctively ethical meaning, as a standard of fairness in intertemporal exchanges. These exchanges, as already noticed earlier in the paper, appear highly asymmetric, with the contemporaries being able to affect the welfare of future generations. In Rawls's later writings, these aymmetries are "corrected" by the terms of exchange among the generations, which descend from the view of society as a fair system of cooperation over time. The term *reciprocity* is a shorthand for these moralized terms of exchange among the different generations (Rawls 2005, pp. 14–16).

Reciprocity in Rawls can be viewed as a composite principle that blends two key elements of social contract ethics, namely impartiality and mutual advantage. The impartiality of Rawls's and Sacconi's social contracts is guaranteed by the requirement that the contractors adopt the veil of ignorance. The mutual advantage aspect is most evident in Sacconi's first SC: each stakeholder can drop out of the agreement if it does not work to the stakeholder's advantage, meaning that the stakeholder does not improve over the status quo through its participation in the firm.[8]

Rawls notices that while impartiality is essentially an altruistic concept, mutual advantage stresses instead one's payout. The two concepts would thus seem irreconcilable. Reciprocity comes to the rescue, because it is a:

> ... relation between citizens expressed by principles of justice that regulate a social world in which everyone benefits judged with respect to an appropriate benchmark of equality defined with respect to that world (Rawls 2005, p. 17).

In Rawls, the mutual advantage is not to be defined according to a subject-specific disagreement point. Rather, "Rawls develops a conception of the non-agreement point that is symmetrical: all parties are equally ignorant of how they would do in the state of nature" (Quong 2007, p. 80). Quong points out that a purely mutual advantage account of the hypothetic agreement reached in the original position would be hard to reconcile with the original position methodology. It would imply lifting the veil of ignorance and knowing the specific features of the disagreement point, the one that would prevail in the absence of an agreement. Several existing accounts of the social contract have modeled a moralized status quo (e.g., Gauthier 1986 and Binmore 2005) obtained by permutation of the different contractors' disagreement points. This exercise implies, however, being able to list all the contractors, and being able to simulate their viewpoints, both arduous tasks in an intergenerational context. "Thickening" the veil of ignorance in such a way as to make the decision maker unaware, among other things, of the amount of natural

[7] Cf. also Doorn (2010) considering the challenge of "inclusiveness," i.e., including all relevant actors, for the application of Rawls's theory. And Arenas and Rodrigo (2016), discussing how indirect reciprocity can ease the problems posed by the impossibility of posterity to reciprocate.

[8] This is essentially the "Lockean proviso" discussed by Gauthier (1986, p. 205), applied to the bargaining problem among the stakeholders.

resources available, is a more promising approach. If the stakeholders in the original position view themselves as per Rawls's description, they cannot be moved by the desire to drop out of the firm in order to emit or use natural resources in an unsustainable fashion outside of the firm. Any such behavior would violate the view of society as a moralized system of exchange among generations that breathes life into the social contract account of sustainability discussed in this paper.

5 Conclusion

In this essay, I have shown that the SC between the firm and its stakeholders, in its current formulation, does not guarantee a fair treatment of future generations of stakeholders. The reformulation of the SC I find most defensible views the SC as a hypothetical ahistorical agreement reached behind a thick veil of ignorance. The norm that is singled out in this reformulation, reciprocity, asks corporate decision makers to choose in the same way they wished all past and future generations had chosen regarding the rate of consumption of natural resources and the rate of emissions.

The governance structure of the firm, i.e., the allocation of decision-making powers within the organization and the constraints we impose on those powers, needs to reflect the features of the hypothetical ahistorical agreement discussed in this paper. The reformulation that views the first SC as a grand assembly of all past, present and future stakeholders can accommodate the manager's fiduciary position toward all stakeholders, at the expense of feasibility and usefulness in practice. In the case of the ahistorical SC, the fiduciary obligation of the manager with respect to all stakeholders would be deprived of any reference to time-specific features of the claim of the stakeholders. Further work remains to be done on how the current stakeholders and the public regulators might facilitate the representation and reasoning required by the amended social contract.

An alternative way to introduce a concern for future generations into SC models is to think of different layers of contracts, from macro to micro, an approach pioneered by Donaldson and Dunfee (1999). One could describe sustainability as a "hypernorm" that comes from the macro-contract. Hypernorms in the work of Donaldson and Dunfee (1999) are typically concerned with procedural aspects of social contracts such as the rights of voice and exit of the different categories. Future work might consider sustainability as the result of the right of posterity to "exit," in the sense of a right to non-interference from earlier generations.

Compliance with ethical standards

Conflict of interest The author declares that he has no conflict of interest.

References

Arenas D, Rodrigo P (2016) On firms and the next generations: difficulties and possibilities for business ethics inquiry. J Bus Ethics 133(1):165–178

Asheim GB (2010) Intergenerational equity. Annu Rev Econ 2(1):197–222

Attas D (2008) The difference principle and time. Polit Philos Econ 7(2):209–232
Barry B (1977) Justice between generations. In: Hacker P, Raz J (eds) Law, morality, and society. essays in honour of H.L.A. Hart. Clarendon Press, Oxford
Barry B (1989) Theories of justice. University of California Press, Berkeley
Binmore K (2005) Natural justice. Oxford University Press, Oxford
Blanc S, Al-Amoudi I (2013) Corporate institutions in a weakened welfare state: a rawlsian perspective. Bus Ethics Q 23(04):497–525
Blount S (1995) When social outcomes aren t fair: the effect of causal attributions on preferences. Organ Behav Hum Decis Process 63(2):131–144
de Shalit A (1995) Why posterity matters. Routledge, London
DesJardins J (1998) Corporate environmental responsibility. J Bus Ethics 17(8):825–838
Donaldson T, Dunfee TW (1999) Ties that bind: a social contracts approach to business ethics. Harvard Business Press, Boston
Doorn N (2010) Applying rawlsian approaches to resolve ethical issues: inventory and setting of a research agenda. J Bus Ethics 91(1):127–143
Endres A (2010) Environmental economics: theory and policy. Cambridge University Press, Cambridge
English J (1977) Justice between generations. Philos Stud 31(2):91–104
Falk A, Fischbacher U (2006) A theory of reciprocity. Games Econ Behav 54(2):293–315
Fehr E, Schmidt KM (2006) The economics of fairness, reciprocity and altruism-experimental evidence and new theories. In: Kolm S-C, Ythier JM (eds) Handbook of the economics of giving, altruism and reciprocity, Chapter 8, vol 1. Elsevier, New York, pp 615–691
Fox M, Tost LP, Wade-Benzoni KA (2010) The legacy motive: a catalyst for sustainable decision making in organizations. Bus Ethics Q 20(02):153–185
Francés-Gómez P, Del Rio A (2008) Stakeholder's preference and rational compliance: a comment on sacconi's csr as a model for extended corporate governance ii: compliance, reputation and reciprocity. J Bus Ethics 82(1):59–76
Freeman RE, Reed DL (1983) Stockholders and stakeholders: a new perspective on corporate governance. Calif Manag Rev 25(3):88–106
Gauthier D (1986) Morals by agreement. Clarendon Press, Oxford
Grossman S, Hart O (1986) The costs and benefits of ownership: a theory of vertical and lateral integration. J Polit Econ 94(4):691–719
Hart SL (1995) A natural-resource-based view of the firm. Acad Manag Rev 20(4):986–1014
Heede R (2014) Tracing anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers, 1854–2010. Clim Change 122(1–2):229–241
Jensen MC (2001) Value maximisation, stakeholder theory, and the corporate objective function. Eur Financ Manag 7(3):297–317
Jeurissen R, Keijzers G (2004) Future generations and business ethics. Bus Ethics Q 14(1):47–69
Mansell SF (2013) Capitalism, corporations and the social contract: a critique of stakeholder theory. Cambridge University Press, Cambridge
Nickel JW (2015) Ethical protections for future persons: Is their present non-existence a serious problem? J Bus Ethics 127(4):717
Pontara G (1995) Etica e generazioni future. Bari, Laterza
Postma DW (2002) Taking the future seriously: on the inadequacies of the framework of liberalism for environmental education. J Philos Educ 36(1):41
Quong J (2007) Contractualism, reciprocity, and egalitarian justice. Polit Philos Econ 6(1):75–105
Rawls J (1999 [1971]) A Theory of Justice (Revised Edition ed.). Belknap Press of Harvard University Press
Rawls J (2005) Political liberalism (Columbia classics in philosophy), 2nd edn. Columbia University Press, New York
Rilling JK, Gutman DA, Zeh TR, Pagnoni G, Berns GS, Kilts CD (2002) A neural basis for social cooperation. Neuron 35(2):395–405
Roemer J, Suzumura K (eds) (2007) Intergenerational equity and sustainability. Palgrave Macmillan, Basingstoke
Sacconi L (2006) A social contract account for csr as an extended model of corporate governance (i): rational bargaining and justification. J Bus Ethics 68(3):259–281
Sacconi L (2007) A social contract account for csr as an extended model of corporate governance (ii): compliance, reputation and reciprocity. J Bus Ethics 75(1):77–96
Sen A (2011) The idea of justice. Harvard University Press, Cambridge

Shrivastava P (1995) The role of corporations in achieving ecological sustainability. Acad Manag Rev 20(4):936–960

Singer A (2015) There is no Rawlsian theory of corporate governance. Bus Ethics Q 25(1):65–92

Speth JG (2008) The bridge at the edge of the world: capitalism, the environment, and crossing from crisis to sustainability. Yale University Press, New Haven

Stern N (2007) The economics of climate change: the stern review. Cambridge University Press, Cambridge

Steurer R, Langer ME, Konrad A, Martinuzzi A (2005) Corporations, stakeholders and sustainable development i: a theoretical exploration of business-society relations. J Bus Ethics 61(3):263–281

Tremmel JC (2009) A theory of intergenerational justice. Earthscan, London

Van Oosterhout JH, Heugens PP, Kaptein M (2006) The internal morality of contracting: advancing the contractualist endeavor in business ethics. Acad Manag Rev 31(3):521–539

Wackernagel M, Rees WE (1997) Perceptual and structural barriers to investing in natural capital: economics from an ecological footprint perspective. Ecol Econ 20(1):3–24

WCED (1987) Our common future. Oxford University Press, Oxford