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**Buchanan and the Social Contract:
Coordination Failures and the Atrophy of Property Rights**

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Abstract

James Buchanan advocated that societies should be based on a social contract. He rejected anarchy, seeing it as a “Hobbesian jungle” that calls for government intervention to maintain social order. He also opposed to theories of spontaneous order. These views led to debates about the compatibility of Buchanan’s works with classical liberalism, and even with democracy. This paper contributes to this discussion by exploring the development of Buchanan's views on anarchy from a historical viewpoint. We argue that Buchanan's earlier works contain a theory of spontaneous cooperation, and that Buchanan held to this theory until the 1970s. Then, the deteriorating conditions of American society got him convinced that albeit anarchy is theoretically desirable, cooperation requires individuals to enter a social contract and delegate enforcement authority to political institutions. Overall, the paper reconciles Buchanan's practical views with his philosophical inclinations, portraying him as a practical contractarian but a philosophical anarchist.

Keywords: Buchanan, social contract, government intervention, anarchy, spontaneous order

JEL: B53; H11; P26

1. Introduction

James Buchanan's views on institutions are well known. They imply a belief that societies should be built on a social contract, "a basic legal structure, a constitution" (Buchanan 1973a, p. 4), that "[v]iable society only becomes possible when it is given a legal or constitutional structure that details procedures for avoiding and for resolving interpersonal conflicts" (p. 4). Buchanan was indeed, and by his own admission, "a constitutionalist" (p. 4), "a constitutionalist and a contractarian" (1978, p. 29). And, accordingly, he was not an anarchist. Not if anarchy designated a peaceful and ordered situation. Although he admitted of being "a philosophical anarchist" (Buchanan 1973a, p. 3; 1978, p. 29), to him, anarchy could not but be a "jungle" (Boettke 2014, p. 351) or, more precisely as he repeatedly defined it after 1972, a "Hobbesian jungle" (Buchanan 1975a, p. 45; 1975b, p. 19; 1978, p. 31; 1985, p. 11; 1986 [1999], p. 22; 2005, p. 96). He was "Hobbesian in his attitudes towards anarchy" (Brennan 1987, p. 16), his "vision of a society without government is Hobbesian" (Holcombe 2014, p. 362). Anarchy was not, in Buchanan's mind, a viable form of social organization. It does not allow individuals "to leap out of the Hobbesian jungle" (Buchanan, e.g., 1975b, p. 19). The contractarian, did he wrote, differs from "the libertarian anarchist, who sees no cause for any laws and who trusts to individuals' own respect for each other's reciprocal natural boundaries" (Buchanan 1978, p. 41). His world opposes to the "romantic ideal of laissez-faire, the fictional image of the anarcho-capitalists" (Buchanan 1989 [2001], p. 244). Complementarily, the need for a social contract meant that Buchanan also opposed another form of laissez-faire institutionalism, that of the spontaneous order theory. In the *Limits of Liberty* (Buchanan 1975a) and in "Law and the Invisible Hand" (Buchanan 1977a), he refused to "elevat[e] the evolutionary process to an ideal role" (Buchanan 1975a, p. 211), and rejected "Hayek's implicit attribution of efficiency to whatever institutions emerge from an evolutionary process" (Buchanan 1977a, p. 33). He disagreed that spontaneous interactions among individuals necessarily produce "order", and thus, claimed that any analysis, including Hayek's, would be "misleading" (p. 32) in suggesting that it could be the case. Buchanan indeed spoke of "spontaneous order" and "Spontaneous Disorder" (pp. 27-30), suggesting that the outcome of spontaneous, unregulated or "anarchistic" interactions should never be taken for granted.

This defense of contractualism, of a social contract and the related opposition of anarchism and spontaneous order have largely been discussed. The compatibility of such a philosophy of social order with the principle of classical liberalism which Buchanan also claimed to defend was questioned. To some, there was no conflict, the differences were only apparent, and Buchanan's views were part of the same defense of classical liberalism supported by anarchists and spontaneous order theorists (see e. g. Vaughn 2014; Vanberg 2010, 2020). To others, Buchanan could be said to be

a classical liberal depending on how his contractualism was defined (see for instance Kliemt 2014). Others went one step further and claimed that, although Buchanan was not an anarchist, his theory “provid[es] the analytical building blocks for the positive theory of anarchism” (Boettke and Candela 2020, p. 7; see also Leeson 2011; Salter 2014). Some, however, argued that the way he presented the state of nature and the need for a government was so problematic that Buchanan cannot actually be seen as a classical liberal. Indeed, as Randall Holcombe (2014, p. 371) noted, a tension exists in Buchanan’s work between “consent and coercion”, between Buchanan’s classical liberalism and his insistence on “the need for an outside enforcer”, for “a third-party enforcer” without whom “a productive and orderly society “is a conceptual mirage”” (ibid.; see also Holcombe p. 2020). Yet, to Holcombe, identifying this tension was important, and even necessary because it means identifying a problem with which concrete societies have to deal. Others were less positive. To Sonja Amadae, Buchanan drifted far away from classical liberalism and it would be more correct to see him as a neo-liberal (Amadae 2016). Nancy MacLean went one step further, arguing that Buchanan’s theory could not but serve to legitimize strong, authoritarian and anti-democratic regimes (see MacLean 2017), his Hobbesianism even being the evidence of a proximity with white supremacism.

The purpose of this paper is to contribute to this debate. By looking at the evolution of Buchanan’s thought from an historical viewpoint, we offer a novel perspective on his social philosophy and on how it changed over the years providing arguments that partially reconciles the diverging views that were expressed on the latter. In contrast with Amadae (2016) and MacLean (2017) – and many others for that matter – we do not take *The Limits of Liberty* as perfectly representative of his views on social order. Following Art Carden, Vincent Geloso and Philip Magness (2019) we note that Buchanan did not use the term Hobbesian. Buchanan actually ever mentioned anarchy before the early 1970s. The Hobbesian vision of anarchy that pervades the works he wrote in that period – and the many that would have followed – was not a product of his theoretical convictions, but rather, of the social and political contingencies of the mid 70s when Buchanan observed a “mounting behavioral disorder” (1986, p. 69), “the emergence of anarchy in civil society” (p. 69) or better, of “constitutional anarchy” (1973a, p. 5; 1975a, p. 10, p. 19, p. 206; 1977b, p. 253; Buchanan and Wagner 1978, p. 173). The situation was new to him, and he needed tools to analyze it. Tools that were provided by one of his colleagues at the Virginia Polytechnic Institute, Winston Bush. Bush’s work and his way of modeling “the anarchy of a Hobbesian jungle in terms of modern economic theory” (Buchanan 1986, 70) gave Buchanan a mean of analyzing what he was observing.

It has already been noted and studied how this context shaped Buchanan’s views on anarchy (see Carden, Geloso, Magness 2019; Fleury and Marciano 2018; Moss 1977; Powell and Stringham 2009). That this context took Buchanan by surprise, however, has not been studied or perceived. For,

Buchanan's admission that he needed tools to understand a changing situation can only suggest that his earlier theories on social order and organization were no longer applicable. This cannot but imply that his Hobesianism had not always been there, as MacLean (2017) for instance suggests, but that it developed over the years as a contingent response to the situation he was living. We indeed demonstrate, in line with Boettke and Candela (2020), Leeson (2011) and Salter (2014), that some of the works he drafted between the 50s and 60s on cooperation, public goods and externalities provide more than the *building blocks for a positive theory of anarchism*: it is a genuine theory of spontaneous cooperation that we find there, a theory consistent with a Hayekian or with an anarchist view of order.

The most straightforward implication (and the paper's first contribution) is that Buchanan did not defend *in principle* the need for a third-party enforcer. That at some point he believed in the necessity of it does not mean that he *always* believed in it. We show that, until the late 1960s, Buchanan was confident that individuals would voluntarily and spontaneously engage in collective action when interactions took place in small groups and were guaranteed by property rights, and thus, that government intervention could be relegated to those situations in which those two conditions could not be met. "Ordered anarchy", or at least, spontaneous order was possible. He lost this confidence the moment he observed the deteriorating conditions of American society in the 70s. It was then that he got convinced that small groups interactions were no longer possible in our modern societies – where "the sweep of history is considered to make inevitable and irrevocable the interaction of larger and larger numbers of person" (Buchanan 1965b, p. 11) – and that private individuals no longer had the power, ability, or will to enforce their property rights – partially, because "the modern man has gone soft" as he wrote in a less related paper written in the same period (Buchanan 1975a, p. 75). Although he still believed that "[i]n an elementary idealized sense, anarchy would clearly be the most desirable of all social arrangements" (1973a, p. 3) he had to admit that spontaneous cooperation and ordered anarchy were nothing but a theoretical possibility, if not, as he wrote, a "romantic ideal" or a "fictional image". A social contract enforced by a third party was the only possible solution to achieve social stability. The "philosophical anarchist" was then forced to become a "practical contractarian".

The remainder of the paper is organized as follows. Section 2 shows that Buchanan's interest in the problem of social organization is rooted in the connection that he and many others established between market failures and the need of collective action. The management of externalities and the production of public goods, he came to realize, call for collective solutions that market-exchange institutions alone were unable to provide. He also added that these solutions can be either produced through "private" collective action, where enforcement authority remains in the hands of private

individuals, or through “political” collective action, where rights are enforced by government or political institutions. Section 3 analyzes the works Buchanan wrote in the 1950s and 1960s in which he detailed the conditions for private collective action to obtain, while Section 4 look at those written in the 70s that conversely discuss the need for government intervention and political collective action. Section 5 concludes and summarizes.

2. On the possibility of spontaneous order: externalities and collective action

It was in the early 1970s that Buchanan wrote the first essays in which he ever mentioned anarchy – *Academia in Anarchy. Economic Diagnosis* (co-written with Nikos Devletoglou 1970) and “The New Barbarians” (drafted for the 1970 Public Choice Society annual conference). Then, in 1972, Winston Bush, set up a seminar on anarchy at VPI. Buchanan was, of course, involved and it was in this frame that he wrote two important essays: “Before Public Choice” (1972) and his magnum opus from this decade, *The Limits of Liberty. Between Anarchy and Leviathan* (1975a). Bush's work played a significant role in the evolution of Buchanan's thought, because it offered new tools to analyze a situation – that of American society – which Buchanan felt he was no longer able to understand. Buchanan went on writing on the subject for almost the entire decade, drafting academic papers – “America's Third Century in Perspective” (1973a), “Boundaries on Social Contract” (a slightly revised version of “Before Public Choice” with a different title, published in 1975, 1975b), “Political Constraints on Contractual Redistribution” (with W. Bush, 1974), “Law and the Invisible Hand” (1977a), and “A Contractarian Perspective on Anarchy” (1978) – to which one may add non-academic pieces lectures – “Anarchy, Order, and The Social Contract”, 1973 – as well as articles on violence – “Economic Analysis of Order (and Disorder or Violence)” submitted at the National Science Foundation in 1971.

Buchanan's anti-anarchistic position is clearly stated, for instance, in “Law and the Invisible Hand” (1977a), where he defended the need for a social contract and government intervention using the example of a group of individuals that collectively generate a public bad: pollution on a beach – “consider... the dumping of litter on the beaches near San Diego. (We assume, for now, that there is no law against dumping such litter.) We should not be able to observe the result: beautiful beaches made ugly by litter.” (1977a, p. 27) If one admits that “beautiful beaches made ugly by litter” (p. 27) is not an objective that society wants to reach, Buchanan added, then, the situation illustrates a case of market or coordination failure. In the absence of a specific and explicit “law”, that one supposes would be binding, individuals fail to produce the public good they could have produced. They produce a public bad, failing to internalize the externalities they create. The pollution resulting from the absence of an explicit and properly enforced law that Buchanan interpreted as the result of a spontaneous process indicates that the situation is socially inefficient.

The example was not meant to illustrate a problem in public economics regarding the provision of a public good or the internalization of externalities. Rather, it served to illustrate an institutional problem, a problem of coordination that should have been solved with properly designed institutions— “I want to discuss the applicability of the principle of spontaneous coordination to legal institutions” (Buchanan 1977a, p. 30). Buchanan used this example to evidence how cooperation failures, “spontaneous disorders”, may emerge in a very specific context, that of the absence of formal law and therefore of anarchy. In this paper from 1977, Buchanan had a specific purpose, namely, discussing the limits of anarchy, to paraphrase the title of his then most recent book (Buchanan 1975a). Littering the beach was an example of what anarchy could produce. Buchanan was clear about that: “[t]he "order" which emerges, the littered beach, has been produced by anarchy” (1977a, p. 28). He insisted that the example was meant to “illustrat[e] that the "invisible-hand explanation" may be as applicable to "orders" that are clearly recognized to be undesirable as to those that are recognized to be desirable” (p. 28). Or, that “the principle of spontaneous coordination, properly applied to our beach littering example, allows us to understand and to explain the possible economic inefficiency that would characterize the anarchistic equilibrium (p. 30).

Buchanan used this example to link externalities, public goods, and market failures to a specific form of collective action: government intervention. Of course, he was not the first nor the only one to do so. The debate dated back to, at least, A. C. Pigou (1920) – when it had given birth to the controversy on the problem of social cost with Frank Knight (Knight 1924) – and had been put forward again in the 1950s, when economists stopped considering externalities as “exceptional and unimportant” (Scitovsky, 1954).¹ Paul Samuelson (1954), for instance, was not far away from suggesting that government intervention was the only way to deal with market failures, something that Richard Musgrave (1960) argued more strongly and more clearly. However, Buchanan went one step further than these economists. In *The Calculus of Consent* (Buchanan and Tullock 1962), Buchanan and Tullock proposed an economic theory of collective action based on externalities: “collective action [is] as a means of reducing the external costs that are imposed on the individual by purely private or voluntary action” (p. 45). Thus, the presence of external effects, the fact that each private individual action generates effects on others, was viewed as the *sole* reason for which individuals may decide to engage in collective action.

This, however, did not imply that *all* externalities require collective action. That was a major difference between Buchanan and most of the economists in the 1950s. As Buchanan wrote in his review of Richard Musgrave’s *The Theory of Public Finance: A Study in Public Economy* (1960), “the

¹ See Medema (2020) for a history on how and when externalities came back on the economists’ research agenda in the 1950s (see also Marciano and Medema 2015).

impossibility of exclusion is not a necessary condition for collective action in satisfying a genuinely "social want" (Buchanan 1960, p. 237). Or, as Buchanan and Tullock (1962, p. 61) wrote, "The existence of external effects of private behavior is neither a necessary nor a sufficient condition for an activity to be placed in the realm of collective choice". Sometimes, these externalities are so minor – "Pareto irrelevant" (Buchanan and Stubblebine, 1962) – that individuals will (or should) not want to remove them.² In addition, non-marginal or Pareto-relevant externalities need not always to be dealt with government intervention. Buchanan opposed the "fundamental implication" welfare economists derived from Pigou, namely "that externalities are either reduced or eliminated by the shift of an activity from market to political organization" (p. 17) – where "political organization" referred to the coercive form of collective action that involves the government. To him, another form of collective action was possible, that was voluntary and private: individuals could gather to solve a problem that result from the interdependencies that exist between them, without relying on government intervention. Individuals could indeed find ways to organize spontaneously to remove externalities: "*voluntary co-operative arrangements*" could "emerge... among individuals... to insure the elimination of all relevant external effects" (p. 48; italics in original).

Buchanan explained that a necessary condition for individuals to engage in private collective action in order to deal with the externalities their choices generate was first of all to recognize these externalities or, in other words, to recognize the interdependencies that bind them together. Again, the reasoning was radically different from that of Paul Samuelson, Musgrave, Francis Bator and many others. Whereas the latter saw the origin of market failures in the very existence of interdependencies – because, once individuals understand that their utility depends on the amount of good consumed by others, they hide their true preferences (Musgrave, 1939, 1941, 1960; Samuelson, 1954) – Buchanan argued that it lays in the inability of the individuals to recognize these interdependencies.

Now, as Buchanan (1954) had written as early as in 1954 in a paper that drew a distinction between markets and politics, individuals often ignore these interdependencies, being "unconscious of the secondary repercussions of [their] act of choice which serve to alter the allocation of economic resources" and therefore "assum[ing] [themselves] apart from, or external to, the social organization which does influence the alternatives made available" (p. 336). And that was the reason, he argued, for which markets would fail to allocate resources efficiently in presence of externalities. In politics, he claimed, the situation was different. "[I]n the polling place", Buchanan added, each individual "is

² Buchanan had not coined the term yet when he wrote *The Calculus*, a first draft of which was completed before June 1960. And Buchanan and Stubblebine started working on *Externality* in 1961. The argument was already there, even if the term was not.

fully conscious of his participation in social decision-making” and “recognizes that his vote is influential in determining the final collective choice” (p. 336). In politics individuals thus take into account the interdependencies that link them to one another and realize to what extent their actions impact on the others. At that time he then proposed to shift the provision of public goods or the management of externalities-generating activities in the political realm.

The conclusion made sense in 1954, when Buchanan had not developed a theory of collective action yet and had not, in particular, introduced a distinction between two forms of collective action, private and political. It could also seem to imply a justification of government intervention. That was not the case. It became clearer a few years later when he explained that politics, and more precisely, government intervention, is not more efficient than markets (Buchanan 1962) and thus cannot be relied upon to solve market failures. The collective action he called for was of a different type, namely, *private* collective action. This is what he and Gordon Tullock explained in *The Calculus of Consent*, distinguishing between private and political collective action. Thus, already in the early 1960s, Buchanan had a theoretical framework to explain when and why individuals should spontaneously organize collectively.

After *The Calculus*, one of the first mentions he made of that problem was in an article co-authored with Milton Kafoglis, “A Note of Public Good Supply” from 1963. Buchanan and Kafoglis (1963) examined the amount of vaccine shots that each individual must consume to enjoy a certain number of healthy days in a given year. In a social vacuum, each individual can achieve that target with a certain quantity of vaccine. Once society enters the picture, however, that quantity decreases if others are also vaccinated. Indeed, vaccinated individuals are less contagious and generate an externality that positively affects the others’ health, reducing the efforts the others need to make and the number of shots they must take. The same quantity of health can be produced by using a smaller amount of vaccine.

But obviously, individuals can benefit from joint supply and from the positive externalities individual vaccination generates only if they understand that an interdependence exists between them. If each individual “is assumed to take into account only the effects of his actions on his own utility or that of his family group” (p. 403) and neglects “the external benefits that his own decisions impose on others” (p. 408), then the efforts the collectivity has to put to provide “health” (as any other public good that can individuals can supply collectively) are higher than those that should be made if individuals did not behave as if they were independent from the others. They cannot benefit from the positive externalities their actions generate. There is a market failure that comes from a coordination failure. Complementarily, if individuals acknowledge the interdependence that links them to one another, they can organize themselves to supply health jointly and therefore benefit

from the positive externalities engendered. In that case, individuals would spontaneously, voluntarily and privately, engage in collective action. The market failure is dealt with a spontaneous coordination between individuals, and there is no need to resort to government intervention.

A few years later, towards the end of the 1960s, Buchanan repeated exactly the same claims. Two of his works, "Cooperation and conflict in public goods interactions" and "A behavioral theory of pollution", respectively written in 1967 and in 1968, are particularly relevant since they examine the same problem he treated in the article with Kafoglis – the collective supply of a public good. As in that article, Buchanan assumed that individuals could either choose what he and Kafoglis call the "independent adjustment", that is, to behave as if they were independent from the others, or to engage in collective action. He then showed that only the second solution could lead to a Pareto-efficient allocation of resources. That individuals were supposed to have that choice is interesting, because it evidences that they might choose the socially efficient behavior spontaneously, without being coerced by the government or pushed by external constraints.

Thus, Buchanan claimed that spontaneous coordination was possible if, first, individuals acknowledge the existence of interdependencies among them, and, second, organize collectively to benefit from the positive spillovers their individual behaviors generate. The capacity to engage in collective action, however, depends in Buchanan's work on another important condition: the number of individuals involved in the interaction. The threefold relationship between group size, free-riding and coordination interested Buchanan since the writing of *The Calculus of Consent* (see Marciano 2015). In an article from 1961, that was republished in that book, Buchanan insisted that the pursuit of narrow self-interest could be controlled when the number of individuals involved in the interaction was limited. That was also an important conclusion he and Kafoglis derived in the article they coauthored: "when the interactions extend over a large number of persons, the costs of attaining voluntary agreements may become prohibitive, and any approach to the "optimal" solution in this fashion may be precluded" (Buchanan and Kafoglis 1963, p. 412).

Some years later Buchanan was sticking to the same idea, convinced as he was that the size of the group was a major determinant of the ability of individuals to engage in collective action to solve market failures:

In the pure public-goods interaction examined here, the shift in the size of the interacting group exerts an important influence on the relative reward to cooperative behavior on the one hand and to exploiting behavior on the other... As the number increases only from two persons to three, for example, the single person's behavior affects his own enjoyment of the good by one-third rather than by one-half when behavior is symmetrical. He will, therefore, have less incentive to initiate cooperative action and more incentive to behave contrary to

the whole group's interest (Buchanan 1967, p. 115)

The mechanism he highlights in this passage is not the only one, nor the most relevant he chose to emphasize to explain the impact of numbers on the individual's ability to cooperate. In his view, the size of the group not only determines the private returns to unilateral cooperation, as he states in the above quotation, but also, and perhaps more importantly, the individuals' perception of the influence that their choices exhibit on others. To make this argument, Buchanan simply distinguished between two types of environments, small and large number environments.

3. Large groups vs small groups

Why would individuals behave differently in small compared to large groups? In large groups, Buchanan argued, individuals anticipate that their own behavior will not influence the behavior of others: "in such large groups the individual considers his own action to exert substantially no effect on the actions of others" (Buchanan 1965b, p. 9). As a consequence, each individual behaves non-strategically, "simply react[ing] or adjust[ing] to the behavior of "others" in a manner similar to his reaction to natural environment" (Buchanan 1967, p. 113). "Natural", here, refers to the fact that individuals treat others as part of nature, taking their behavior as given and assuming that it is independent from theirs – "The behavior of the other is embodied as data in the choice calculus, but the other person is not considered to be subject to influence or control, positively or negatively" (p. 111).

Conversely, in small groups, such as an "isolated setting" (Buchanan 1965b, p. 6) of 3 persons or "a desert island" (p. 6) when "personal interaction is recognized" (Buchanan 1968a, p. 86), "utility maximization... will not exhibit the observable properties of utility maximization in a large number setting" (Buchanan 1978, p. 366). More precisely, individuals no longer follow their "narrowly defined self-interest" (p. 366) but rather adopt "moral or ethical principles" (Buchanan 1961a, p. 340), precisely, because they now expect that their choices can influence the others'. Individuals adapt their behavior to the behavior of others or, to use Buchanan's words, they behave "strategically" (1968a, p. 91). They do not treat others as a part of nature, as if their behavior was given. This means that, still in contrast with what happens in large number environments, individuals cannot ignore that their behavior matters and may affect others.

Buchanan repeated the point many times over the years: each individual "will tend to recognize that his own choice of a rule, and subsequent adherence to it, will to some considerable extent influence the similar choices to be made and followed by the other two members" (1965b, 6). Or, later, "So long as the interaction is limited to small groups, [the individual] will recognize that his own action can exert some influence on the behavior of others in the group" (1967, p. 115). And

again, an individual who “contributes nothing... may assess the probability of noncooperation on the part of others higher than if he contributes some share” (Buchanan 1968a, p. 86). The conclusion ensued: “This change alone may be sufficient, on rational grounds, to cause him to contribute” (p. 86). Individuals, put differently, stop maximizing their own private utility only, and incorporate other motives (e.g., strategical, ethical) in their choice calculus. And since each individual (rationally) follows the same reasoning, one may expect that all individuals will eventually cooperate. The large-number dilemma disappears. Adam Smith’s invisible hand functions. The “principle of the spontaneous order of the market” (Buchanan 1977a, p. 25), the “principle of spontaneous coordination” (p. 26), applies. Individuals eventually exhaust the gains from trade that remain unexploited in large groups.³

In his 1965 contribution to ethical theory Buchanan generalized these conclusions by studying the effect of numbers on the choice of an individual who must pick either of two different behaviors, “ethical” and “economical”. By selecting the first, the individual chooses what Buchanan (1965b, p. 2) calls “the moral law”, and “commits himself to act in subsequent situations on the basis of something like the generalization principle. That is, he will not act in ways other than those which allow his particular action to be universalized, regardless of the specific consequences”. By selecting the second, that Buchanan instead calls the “the private maxim” or “the expediency criterion”, “he commits himself in advance to no particular principle of behavior. He retains full freedom to act on the basis of expedient considerations in each particular instance that arises” (p. 2). Buchanan then showed that if the individual believes that his choice cannot alter the others’ the rational decision is to retain the liberty of freely maximizing his utility by adjusting his behavior to the outside mutated conditions, to follow the expediency criterion or the private maxim instead of sticking to something akin to the Kantian universalization principle. Each individual makes this choice by ignoring what others do. In a world where cooperation is privately costly, generates non-excludable benefits, and choices are independent from one another, regardless of whether or not others cooperate, each individual belonging to a numerous group privately prefers not to cooperate – “[i]n a group of critically large size, the individual will tend to adopt the rule of following the expediency criterion even if he thinks that *all* of his fellow citizens are saints” (p. 7; italics in original). Why?

On the one hand, because in large-number environments, they are unwilling to pay the private cost of unilateral cooperative behavior knowing that this will not induce others to do the same. On the other hand, because they have an incentive to free-ride on the others’ efforts without paying the private contribution cost. Regardless of the expectations on the others’ behavior, thus,

³ Why Buchanan was this confident that cooperation in small number environments would always emerge, of course, is another interesting question, which this paper leaves unanswered.

the fact of knowing that their own choices cannot affect the others' unavoidably leads to a state of generalized non-cooperation. Even if they understand that unconditional defection unavoidably leads to Pareto inferior outcomes and that everybody would be better off if ways could be found to cooperate with others. Aware that in critically large groups they are not able to influence the behavior of others, no one changes his own behavior. No reason can lead rational individuals to choose to behave differently – "Rationally, he cannot adopt the moral law as a principle for his own behavior." (p. 7). Or, translated in a more standard economic jargon, individuals have a dominant strategy. They are unconditional defectors. Buchanan was rather clear about that: "The individual in a large-group, public-goods interaction... face[s]... no pressure or incentive to behave cooperatively", because he behaves independently from others (Buchanan 1967, p. 121).

As a consequence, individuals in large groups are trapped in what Buchanan called the "large number dilemma" (Buchanan 1965b), which is "similar to, although not identical with, that which is commonly discussed in game theory as "the prisoners' dilemma." (p. 8) Similar, because individuals would be better off by cooperating but, for some reasons, are unable to do so. Different, because the reasons that make such coordination impossible are not the same as in a Prisoner's dilemma. In the latter, cooperation fails because agents cannot communicate and agree on self-enforcing mechanisms that would make "cooperate" the dominant strategy. In the large number dilemma, the presence of many interacting individuals makes communication impossible, destroying a possible way out that would conversely solve the Prisoners' dilemma. Another classical escape from the Prisoner's dilemma that to Buchanan is also prevented in large number environments is repeated play (à-la Tit for Tat), because, in large groups, individuals would not expect to change the others' behavior regardless of the time horizon of interactions. Buchanan was explicit about that: "The results emerge because of the absence of communication between the prisoners and because of their mutual distrust. The large-number dilemma is a more serious one because no additional communication or repetition of choices can effectively modify the results." Later he added, "In a group of critically large size, the individual will tend to adopt the rule of following the expediency criterion even if he thinks that all of his fellow citizens are saints" (p. 7). In other words, Buchanan was explaining, reciprocation is not an option.

Despite these differences, the two Dilemmas generate the same kind of socially inefficient outcome: individuals know they would be better off if they adopted a cooperative behavior but cannot envisage changing theirs. Or, to put it differently, individuals know that some gains could be made by adopting a different strategy, but cannot force themselves to do so. Gains from trade

remain unexploited.⁴

Let us note here that, to Buchanan (1968a, p. 83) “The individual is caught in a dilemma by the nature of his situation; he has no sensation of securing benefits at the expense of others in any personal manner”. Hence, when individuals find it rational to “defect” in large number environments, they behave “neither cooperatively nor competitively vis-à-vis his fellows [...] psychologically, there is no conflict; there are no game-theoretic elements in behavior” (Buchanan 1967, p. 119). Said otherwise, in large number environments “the choosing individual enjoys no sensation of “riding free,” of “letting George do it.” There is no personal interaction present at all. The individual is simply reacting to an environment in which he finds himself, to “nature,” so to speak, not in any way against his fellow citizens” (Buchanan 1965b, p. 9). Not cooperating, (or following the expediency criterion, in the more general choice between that and the moral law), means that individuals maximize their own private utility being convinced that this will not affect the behavior of others, who reason in the same identical way. Each of them behaves as if the others were not there.

Thus, choosing not to cooperate in a large group was not interpreted by Buchanan as meaning that individuals would free-ride. From this perspective, Buchanan found the terminology used in public economics about free-riding “misleading” (1968a, p. 83). Indeed, free-riding “suggests some deliberate effort on the part of the choosing individual to secure benefits at the expense of his fellows” (Buchanan 1965b, p. 9). It implies that individuals try “to shift a major share of the burden onto the other while [...] securing a share of the benefits” (Buchanan 1967, p. 114). They really adopt anti-social behaviors (see Marciano 2015). Or, to use another of Buchanan's words, they try to “exploit” others. In other words, free-riders acknowledge and take into account others, knowing that in some game-settings they may change the others’ behavior by modifying theirs, which is incompatible to how individuals are supposed to behave in large groups. In Buchanan’s view, free-riding is more a behavior that could arise but does not in small groups. And why does it not? For the exact same reasons: because individuals acknowledge the interdependencies they have with others and recognize that if they decide to free-ride, the others will do the same, and vice-versa: behaviors are truly interlinked to one another.

In small groups cooperation can spontaneously flourish. And yet, keeping the number of interacting individuals limited is not sufficient to ensure that it does. Even in small-number environment, cooperation, although plausible, should not to be taken for granted. Individuals are indeed prone to opportunistic behavior when rules are poorly defined or enforced, “find[ing] it to [their] advantage to conceal [their] true preferences and to give false signals about those preferences

⁴ This situation corresponds to what Samuelson, and other economists, viewed as the standard case of market failure.

to [their] opponents-partners" (Buchanan 1968b, p. 81). Although Buchanan believed that such behaviors were tolerable to a certain extent (Buchanan 1968a, pp. 357-358), he was also aware that they nonetheless posed inherent dangers. The potential presence of free-riders was indeed an obstacle to private collective action. Individuals would in fact be hesitant to voluntarily enter cost-sharing arrangement if they believed that others could enjoy the benefits engendered without fully committing to the group (Buchanan 1965a, pp. 13-14). The exclusion of free-riders was deemed necessary for private collective action to flourish, and the ability to allow this exclusion particularly through property rights crucial for securing the benefits of group inclusion (p. 13; Buchanan and Tullock 1962, 44). In his view, private collective action requires institutional solutions that ensure both inclusion and exclusion.

To Buchanan (1965a), a club is a private arrangement that allows both, being formed by individuals who are spontaneously willing to cooperate, adhere to shared rules of behavior, and pay the costs to exclude potential free-riders (p. 13). In his words, a "theory of club" encompassed both optimal exclusion and inclusion (p. 13). Clubs, viewed as mechanisms, could effectively address various instances of market failures, particularly concerning local goods, such as a swimming pool or a highway network. Although clubs are most commonly associated with small groups, there was no conceptual limitation preventing them from addressing less impure, less local, and even pure public goods like defense. Buchanan illustrated the potential application of clubs to goods such as lighthouses or vaccines, emphasizing that property rights must be well-defined to prevent free-riding for such arrangements to work (Buchanan 1965a, p. 13). To him, there was virtually no limit to physical excludability, even in cases where interdependence stemmed from the act of consumption itself, provided there was flexibility in property law. In that case, he believed that property rights could be used to lay the conditions for private collective action and ethical behavior to flourish. After having written his 1965 paper on clubs, and when he was writing "Ethical rules, expected values, large numbers", Buchanan sent a letter to Roland McKean, evocatively explaining that he was working on a paper in ethics that had some relevance to property rights⁵.

4. From coordination failures to the social contract: the atrophy of property rights

How does this discussion on group size, property rights and private collective action applies to the case of beach littering and the emergence of spontaneous disorder? From the conditions listed by Buchanan himself, if the number of beach users could have been kept limited and a well-functioning system of property rights established and enforced the mechanic of spontaneous coordination should have in principle applied: by interacting in a small-number environment individuals would

⁵ Buchanan to McKean, 15 March 1965, BP, Box 102, Folder 6.

have in fact recognized that the choice of not leaving their trash on the beach would have incited others to do the same. To solve the littering problem, Buchanan could have then proposed to artificially create a small-number environment, for instance, by founding a club whose property rights system and constitution would have delimited the number of users and defined the rules regulating the use of the beach (including, for instance, the fines that would apply to those who pollute the latter). This would not have been a truly Hayekian solution, as it would have involved some form of collective action. However, it would not have been too different either, since collective action here would have remained private and voluntary. Moreover, it would have been consistent with the theory of clubs he developed in 1965 (Buchanan 1965a) as well as with some of his previous works about cleaning a swamp (see Buchanan 1964) or a river (Buchanan 1968b).

And yet, Buchanan did not envisage the possibility of solving the problem in this way. Although he explicitly admitted that the problem might be the consequence of the absence of property rights – “some economists would go on to suggest that the observed results arise because of the absence of property rights in the commonly used resource, the beach” (Buchanan, 1977a, p. 28) – and even noted that it may be solved through property rights – “If this scarce resource were assigned to some person or group, it would then be in their interest to maintain standards of cleanliness, to internalize the externalities, and in so doing to insure economic efficiency” (p. 28) – he did not explore this possibility at all, arguing that it was not his “purpose... to discuss the particulars of this example or to raise the more general issues concerning the uses to which various constructions of “market failure” have been put” (p. 28).

The 1977 paper was written as if it was impossible to contain the number of visitors attending the beaches near San Diego, as if the socially inefficient outcome “beautiful beaches made ugly by litter” was unavoidable. Buchanan did not even mention the small/large-number distinction when he discussed the (non)emergence of a spontaneous institutional order in the beach littering example. He simply analyzed individual behavior in terms of personal cost – “the personalized costs of cleaning up their own litter” (p. 27) – and personal benefits – “the differential value of the marginal change in the total appearance of the beach that their own activity can produce” (p. 27). The beach was used as an example of “generalized prisoners’ dilemma” (p. 28), a situation where the failure of cooperation was taken as given, with its causes and possible ways out left willingly unexplored.

The seemingly aprioristic refusal to use the beach littering example to discuss the possibility of using private solutions to solve coordination problems is due to the fact that the 1977 essay, as many of Buchanan’s works of the early to mid-1970s, was written to explain why anarchy could not function (and, therefore, why a social contract was necessary). And yet, this is not the only reason nor the most important one. Indeed, Buchanan believed that under certain conditions it might be

impossible to establish or enforce property rights. Discussing pollution, he explained that one of the “means of securing some relief from the public bads that command our attention lies in the reform of property laws, in rearrangements in individual property rights” (Buchanan 1968b, p. 4). Yet, he added, “we should be naive in the extreme if we think that tremendous improvement can be secured through plausible rearrangements in property rights” (p. 5). Not only because establishing property rights on nature was extremely difficult, but also because, as shown by the student riots occurring in those years, it was already extremely difficult to “defend properties that have long been considered to be “private property”” (p. 5). That situation indeed showed that the difficulty of solving market failures using property rights may not lie in the cost of *establishing* the latter, but rather, in the cost of *enforcing* the latter once they are in place. Enforcement costs may be so high that right holders find it irrational to defend their properties. More precisely, if the “damage is less than expected enforcement costs [...] the rational course of action for the potentially damaged party remains one of nonenforcement” (Buchanan 1972, pp. 12-13). In these cases, property rights are no longer able to create the conditions for private collective action to flourish. They soon become void and eventually “atrophy”. When they do, there remains but one solution: the use of “collective force” (p. 9): “If they will not live by rules, men must be subjected to rules” (p. 9). Or, as Buchanan would repeat a few years later, “If men will not voluntarily respect rules or standards of behavior vis-a-vis other men, they must somehow be ruled. This requires the establishment of a ruler, a sovereign, as Thomas Hobbes so perceptively noted three centuries ago” (Buchanan 1973a, p. 4).

Buchanan had already discussed the difficulty of enforcing property rights in the late 1950s. For example, he organized a conference on public finance in 1959 in which he came to discuss the paper presented by Charles Tiebout (see Marciano 2013). There was one point in Tiebout's paper that is important for our discussion. It relates to the case of a group of newcomers who arrive in a place and access the local public goods the early settlers already supplied without paying for their provision. If the word and concept had been part of the language of economists, one could have said that these newcomers behave like free-riders.⁶ To deal with this situation, Tiebout proposed to introduce zoning laws that would exclude potential intruders from consuming the public good for which they have not paid (Buchanan 1961b, p. 94; see also Tiebout, 1956, p. 420).

Buchanan did not disagree with Tiebout's suggestion. The zoning laws or restrictions Tiebout proposed may have indeed created a “[p]rohibition on entry” (Buchanan 1961b, pp. 129) which would have allowed the “early settlers... to create a structure of property rights in ‘taxpayers’

⁶ Let us insist that neither Buchanan nor Tiebout used the term. Let us also insist that, to Buchanan, as he made it clear (and will repeat it in “Ethical Rules”, 1965b), the way newcomers behave is purely rational, and should not be viewed as trying to benefit from the public goods at the expense of others. It's not cheating or parasitism.

surplus” (p. 129). In this way, these early settlers, the individuals who had previously paid for the provision of the public goods, would have been able to exclude the newcomers, safeguarding their surplus. In principle, the solution was acceptable. But, Tiebout had forgotten to take into account an element on which Buchanan insisted in his discussions: excluding the newcomers was not free. Or, put differently, creating and enforcing zoning laws was not free. To cover the costs required to transform the non-excludable public goods in (quasi-)excludable club goods the early settlers would have been obliged to “forego capital gains in order to prevent the entry of “undesirables” into the community” (Buchanan 1961b, p. 128). And, as Buchanan explained, “this sacrifice of capital gains on possible land holdings may be more than offset by the retention of a greater share of taxpayers’ surplus” (p. 128). The costs of creating these excluding devices could have been too large compared to the benefits. In that case, he argued, the early settlers would not have enacted and then enforced such laws and spontaneous disorder would have eventually emerged. At that time, he did not detail the specific conditions that make it impossible to use property rights as an excluding device. Put differently, he did not explain when and why property rights “atrophy”. The question, then, remained unanswered.

He came back to the subject almost two decades later, in 1972, when he wrote an essay titled “The atrophy of property rights” that remains unpublished to this date (Buchanan 1972). In that paper he outlined the specific conditions that may create a divergence between nominal and effective property rights. To do so, he recurred to the notion of Pareto-relevance he and Craig Stubblebine applied to the analysis of externalities ten years earlier (Buchanan and Stubblebine, 1962). Before that paper, Buchanan had already explained that some externalities could be perceived as “negligible” (Buchanan 1960, 237). With Stubblebine he refined that idea by outlining the two conditions that characterize a Pareto-relevant (or non-negligible) externality.

First, the disutility of the affected party, call it A, must be greater than the utility of the acting party, call it B. In this case, it is possible to gain from “trade”: “A [could] surely work out some means of compensating B in exchange for B’s agreement to reduce the scope of the activity” (Buchanan, 1972, p. 380). Second, the change must be Pareto-improving: “when the extent of the activity may be modified in such a way that the externally affected party, A, can be made better off without the acting party, B, being made worse off” (p. 374). By contrast, when “[t]he internal benefits from carrying out the activity, net of costs, [were] greater than the external damage that is imposed on other parties” (p. 381), then the externality could be said to be Pareto irrelevant.

This concept of Pareto-relevance, he explained, can be used to characterize the situations in which property rights become void and cannot be used to lay the conditions for private collective action to spontaneously flourish. When a right-holder’s property is damaged by the external (or

intended) effects stemming from another party's actions, the harm is Pareto-irrelevant if the sum of the disutility suffered by the damaged party and the cost that should be paid to enforce the entitlement is smaller than the utility obtained by the damaging party. In this case, the right-holder has no incentive to enforce his rights, which eventually atrophy.

Of course, in calculating whether an external or intended damage is Pareto-relevant one needs to consider both the objective and pecuniary costs that right holders have to pay to enforce their entitlements as well as the subjective and non-pecuniary cost related to legal actions – “personal discomfort”, “inconvenience”, “bother” or “time” (Buchanan, 1972). The sum of these costs can be so high as to make it irrational for right holders to enforce their entitlements, making Pareto-irrelevant the negative externalities that others impose on them. Non-enforcement is more likely when first, the damaging party can strategically sets the level of its activity at the highest possible level compatible with non-enforcement; second, the property rights are established over goods that are potentially subject to frequent misuse; and third, the total external damage does not result from the act of a single violator but from those of many. Once the process of non-enforcement starts there is potentially no end to it: if owners do not enforce their nominal rights at some point in time, it is unlikely that they will do it in the future, and the atrophy becomes permanent over time.

This was the framework Buchanan had in mind when a few years later used the example of the littered beach to advocate for the need of a social contract supervised by a third-party enforcer. A large beach polluted and spoilt by many occasional visitors was indeed the perfect example of a situation where property rights would easily atrophy, as owners would hardly engage in legal procedures for each piece of garbage that is left on their beach. Damages would be too numerous and enforcement costs disproportionate compared to the benefits. Albeit Buchanan's theory was refined by the work he had done with Stubblebine, the basic intuition was the same he followed to criticize Tiebout's suggestion: property rights cannot always be used to sustain private collective action as a mean to solve market failures. In 1959, Buchanan saw the problem as marginal or secondary and did not recommend resorting to a third-party enforcer. The phenomenon could somehow be accepted. Two decades later, when he discussed the beach littering case, his opinion had changed, triggered by the mutated conditions of American society. The phenomenon “beautiful beaches made ugly by litter” could not be accepted. And it could not be solved by property rights either.

What would then be the solution? Would it be to delegate enforcing authority to political or governmental institutions and turn law enforcement into a public good? At least, this is what some “public-finance scholars” suggested (1972, p. 16). For his part, Buchanan was more cautious – “the analysis here forces us to be more specific with respect to the community's role in financing the

enforcement costs that are incurred in defending nominally-assigned property rights” (p. 16). A publicly guaranteed law enforcement would reduce the uncertainty of property right holders, but it would also increase their “willingness to initiate enforcement action” (p. 16). That would be costly to the government, Buchanan added, but “[t]he presence of major efficiency gains suggests that the productivity of public investment in absorbing these costs may be large” (p. 18). That was exactly the solution Buchanan suggested in the 1977 essay in which he used the example of the beach.

5. Conclusion

James Buchanan was profoundly convinced that individuals would be better off could they engage in private collective action to deal with market failures. And yet, he repeatedly argued that anarchy could not but be “Hobbesian jungle”. Although he looked at government intervention with caution if not diffidence, he had to admit that it was unavoidable to maintain social order. This could be viewed as contradicting what he had argued in the 50s and 60s about cooperation in small groups. In such environments, he believed, individuals were able to understand that gains could be made from cooperating and build institutions to organize their private collective action without any external constraint. Then came the 1970s, bringing a wave of transformation and change that would have shaken the very foundations of society. The rights that had been established by the social contract were no longer respected and the victims of these violations – the “law-abiding citizens” (Buchanan 1975b) – were “unable to block the unilateral violation of the social contract” (1975b, p. 24). The protestants had little to gain by respecting the law, and little to fear in going back to the state of nature. The law-abiding citizens on the other hand had much more to lose. Their threat “to plunge the community into Hobbesian anarchy” (p. 24) was not credible. The rights established by the social contract begun to “atrophy” (p. 23). It was in this context that Buchanan realized that government intervention was needed: the property rights that could in principle maintain a state of spontaneous cooperation among private individuals gathered in small groups (or clubs, as another piece of his theory suggests) are too costly to enforce in the absence of political institutions. Private collective action cannot be used to solve market failures, and only spontaneous disorder can eventually emerge from the unregulated interactions among private individuals. The very reason why societies cannot function but in the shadows of political institutions is that individuals are only able to cooperate when they are coerced to do so. Hence the conclusion ensued: anarchy was nothing but a “fictional image”, a “romantic ideal”. The purpose of this paper was precisely to show that Buchanan never stopped upholding that ideal, but that he was forced to recognize its romantic nature and practically embrace a contractarian position, one he would have held for the rest of his life.

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