RESEARCH ARTICLE

State–market entanglement: some implications for the theory of public finance

Zachary Kessler, zkessle@gmu.edu
Richard E. Wagner, rwagner@gmu.edu
George Mason University, USA

This article is concerned with the way economists conceptualise the relationship between state and market within their theories of public finance. It is customary for them to treat polity and economy as comprising separate domains of human activity. In contrast, the recently developing notion of entangled political economy treats the state–market dichotomy as an abstraction, whereas political and economic organisations are deeply entangled with one another. While property and its distinction between mine and thine is a universal quality of the human species, specific and particular rights of property are always contestable through entanglement among political and commercial entities. Entanglement calls attention to the processes through which rights of action are established and challenged within an entangled system of political economy. What results from our exploration of entanglement and public finance is recognition of the high analytical potential of reviving Antonio de Viti's initial interest in transforming the focus of public finance from the practice of public finance into a scientific theory, thereby joining public finance and public choice to form political economy.

Key words property rights • entangled political economy • human nature • perpetual contestation • Antonio de Viti de Marco • James M. Buchanan

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Introduction

Most economists conceptualise the relationship between politics and economics as additive, by which the compound noun ‘political economy’ denotes the addition of political forces to market interactions. Markets are treated as a domain of contractual interaction that is governed by principles of private property; polities are treated as a domain of protection and completion. By protection, we refer to claims that states are established to protect market interaction from invasion, both external and internal in source, as Buchanan’s (1975) notion of a protective state illustrates; by completion, we refer to Buchanan’s image of a productive state that supplies mutually beneficial
activities that cannot be effectively organised through market processes. To be sure, controversy exists over the identity of the activities that might call for a productive state, and we will make no such effort to ‘properly’ define those activities. It is quite clear that any situation that entails unexploited mutual gains simultaneously implies a prospective opportunity wherein entrepreneurs can potentially seize those gains by developing new organisations or new contractual forms, as Coase (1974) illustrates for lighthouses and Candela and Geloso (2018) extended to lightships. At this point, we enter the messy world of second-best theory and entangled political economy that Wagner (2007; 2014; 2015; 2016) set in motion, with, for example: Novak (2018) exploring the ability of entanglement to cast new illumination on inequality; the essays collected in Hebert and Thomas (2021) examining entanglement from multiple analytical orientations; and Marta Podemska-Mikluch of Gustavus Adolphus College establishing the Entangled Political Economy Research Network (see: www.entangledpoliticaleconomy.org/).

The distinction between additive and entangled visions of political economy rests on a divergence between two conceptualisations of the society to which both political and economic activity pertain. Additive political economy entails the conceptualisation of society as initially an undifferentiated mass of people, with institutional arrangements being inserted into society in response to a generalised logic of economising action. In this respect, James Buchanan (1975) inserted the distinction between protective and productive states into this undifferentiated societal mass, and Douglass North (1990; 1991) treated the emergence of those institutions as humanly created artefacts giving structure to that otherwise undifferentiated mass. In contrast, entangled political economy embraces the analytical point of departure that the members of a society never constitute an undifferentiated mass until institutional arrangements create differentiation. Using this framework, the members of society differ among themselves in endless ways, all of which bring into the foreground Vincent Ostrom’s (1997) amplification of Alexis de Tocqueville’s recognition of the importance of pursuing a science of human association. Rather than treating society as a mass to be shaped by institutional arrangements, there is an under-studied science of human association that would reveal what the philosophers of the Scottish Enlightenment understood, namely, that humans are social creatures who form myriad associations and groupings as they lead their lives. Societies unavoidably entail structured differentiation among persons, roles and activities, for both good and ill. One key feature of this alternative point of analytical departure lies in the recognition that a co-evolution of polities and economies must be built into the analytical cake, so to speak. If polities and economies co-evolve, patterns of property rights must likewise reflect the entangled relation between these spheres, wherein market entities participate to some degree in political activity just as political entities participate to some degree in market activity, muddying Buchanan’s sharp distinction between productive and protective states in the process.

This entangled quality of political-economic interaction was recognised by two of the early 20th-century giants of economics and political science: Frank Knight (1933) and Harold Lasswell (1936). Knight (1933) acknowledged that all societies must necessarily return answers to the questions of what will be produced, how that product will be produced and how much of that product different people will obtain. Lasswell (1936) similarly posed the analytical task of political science as explaining who gets what, how they get it and when they get it. As an analytical simplification,
it is common for theorists to work in terms of such polarities as state–market or
individualism–collectivism, while recognising that reality remains more complex
and subtle than those theoretical distinctions allow, calling to mind Warren Weaver’s
(1948) fundamental distinction between organised and unorganised complexity. In
this respect, Eusepi and Wagner (2011) set forth an analytical framework where states
are conceptualised as ecologies of political enterprises that act inside society, as against
being conceptualised as some unitary entity that acts on society.

This article explores some implications for a theory of public finance of
reconceptualising how continual contestation among political and commercial
entities over particular property rights within a human property system (Wilson,
2020) underpins continual evolution within entangled systems of political economy.
We start by recognising the ubiquity of contestation and evolution as features of
societies. Property rights establish relationships among the members of a society at any
moment; however, those relationships are also subject to margins of contestation and
thus evolve through that contestation. Utilising this alternative analytical framework,
we examine both the micro-level behaviour and macro-level systemic implications
for the economic organisation of the public finances within entangled systems of
political economy.

Entangled political economy and the continual assembling
of societies

Bruno Latour (2005) uses what he describes as ‘actor–network theory’ to inject a
process orientation into social theory. There, Latour asserts that social phenomena are
continually in a process of being deconstructed and reassembled, with that assembly
proceeding through contestation among participants. Among other things, it is
inadequate to explain one social phenomenon in terms of other social phenomena
because social phenomena are continually being reassembled through controversy and
contestation. Social phenomena emerge from within networks of human interaction,
which is the conceptual orientation of entangled political economy. In this respect,
and in a similar analytical vein, the essays collected in Joshua Epstein (2006) explore
some implications and associated methods of treating social phenomena as emerging
out of interactions among individual entities.

Property rights are centrally involved in the processes through which societies
unavoidably address the questions posed by Knight and Lasswell, even if implicitly
and not explicitly, as Yoram Barzel (1989: 114) notes. There, Barzel explains that
property rights can never be completely specified because the cost of doing so for
the participants is prohibitive, reflecting a point emphasised by Demsetz (1964;
1967) when discussing enforcement and alternative ways to internalise externalities
outside any full definition of the property right. Barzel illustrates his point by
referring to the pricing of seats in a concert hall. To avoid complexities associated
with collective-choice processes, suppose the concert hall has a single owner and
contains 1,000 seats. Under a regime of private property, the owner can create
whatever pricing scheme for seats they choose. Spectators might be assigned to
individual seats, in which case, the owner of the concert hall assigns rental rights
to individual seats.

Alternatively, the owner might make no such assignment, leaving admission as
general. With general admission, the owner converts the spectators into a form of
public, where people must compete for seats. Within the context of economising on transaction costs, we may reasonably expect the owner to choose the pricing scheme that maximises their net revenue. For low-demand performances, where no one is willing to pay more than, say, £5, the owner might charge a single price and offer general admission. For high-demand performances, where some people might be willing to pay, say, £200, the owner might capture a larger share of consumer surplus by assigning reserved seats. The extent to which seats within the concert hall are organised through private property (reserved seating) or common property (open seating) depends upon the commercial calculus the owner of the concert hall chooses to exercise.

Within the context of this illustration, the people who buy general admission tickets constitute a ‘public’, whose members must compete for seats. This particular public, however, is not produced through political activity, but effectively created by the owner’s refusal to assign seats. In this instance, a public emerges in consequence of an owner’s commercial calculus. More generally, publics are always present within a society’s institutional arrangements. Those publics can manifest in different ways, as captured to some extent by the contrast between formal and informal institutions. We would also note that the formal–informal distinction likewise pertains to entangled rather than additive relationships. In this respect, property rights pertain to the patterns of moral imaginations that are alive within a society, as Gertrude Himmelfarb (1996) explains with particular lucidity. The extent to which people choose how to dispose of their possessions, as well as the very identity of what they possess, is determined by the general forbearance within society from interfering with one another’s actions. The degree of this forbearance may be ‘explained’ by the transaction costs associated with interference, yet the willingness to bear those costs will be a property of the moral imaginations alive within that society.

It is easy to imagine a widely held public opinion that supports the idea that high-demand theatrical performances should include some subset of people within the audience who would not pay, say, 1 per cent of their annual income for a theatre seat. Indeed, the theatre owner might hold such a moral imagination, try to offer some seats at a below-market price and try to restrict the emergence of secondary markets for such seats through the emergence of scalping, probably with mixed success. Even if the theatre owner holds no such moral imagination, the very existence of such considerations within the public can drive the owner to support anti-scalping legislation should they value the support of this group. The key insight here is that the individual’s particular position is influenced by perceived social pressures and sentiments, which can result in the theatre owner regulating their action relative to what they might ‘truly’ desire, as Timur Kuran (1995) explains in his examination of ‘preference falsification’. In the face of the perceived pressure that accompanies preference falsification, efforts to establish zones of sheltered position against high demanders seeking low-priced seats will, in many ways, be costly to implement in the presence of resale markets for tickets. Holders of these moral imaginations might seek to move at least some aspects of theatre pricing into the political arena. One such arena is through the legislative enactment of laws against scalping, which are also costly to enforce, though it is unlikely that the supporters of such ordinances bear much of the cost of enforcement. Another possibility is through budgetary appropriation, as illustrated by the sponsoring of group admissions for performances by public schools or charitable organisations.
We mention these various possibilities not in a spirit of advocating one over another, but with the objective of illustrating how property rights are not the simple concept that disjunctive theories of public and private finance suggest. Can an owner of property evict at gunpoint some group that has assembled on the owner’s doorstep? Traditional notions of private property might answer affirmatively. Should a spokesperson for the group claim they are there to protest something associated with the property owner, the situation becomes muddled and the definition of a property right possibly altered. Should a public prosecutor support the group and file suit against the property owners, a change in the understanding of what constitutes a property right might be under way. Again, our point in advancing this illustration is not to defend some normative concept of property rights, but rather to inquire into some of the presuppositions that undergird any particular set of property rights at any historical moment, recognising that the spheres of political and commercial activity are invariably entangled within society and, furthermore, with regions of contestation unavoidably existing in any particular historical moment. This acknowledgement requires us to actively incorporate and expand theories of public finance in our understanding of a variety of social structures and norms, as well as their formation and evolution. Formulating public finance in this manner, new insights into traditionally defined objects are unearthed. One such area with significant prospect is property right theory.

**Property rights and the presence of the political in society**

At any historical moment, the members of a society will sort themselves into a variety of activities, occupations and enterprises. Those organisations can be further sorted into those generally associated with political enterprises and with commercial enterprises. The resulting classifications into a state–market polarity suggest a separation between state and market that belies the entanglement existing between the two categories of enterprise. Moreover, this entanglement stems from the individuals who comprise those different enterprises. Both sets of enterprises hold populations of people who speak the same language, who attend the same schools, worship at the same churches, participate in the same clubs and contribute to the same charitable activities. Certainly, the individual position in either a political or a commercial enterprise promotes particular differences associated with success in an enterprise. However, those differences pertain to only a subset of margins of action within a larger remainder of common orientations shared among all. To claim entanglement among political and commercial enterprises states nothing more than the importance of this background similarity in promoting significant analytical progress in coming to understand more fully the social world inside of which we are all unavoidably situated.

Theories of general economic equilibrium describe necessary conditions for Pareto-efficient resource allocations. In isolation, these theories stand as nothing more than metaphysical propositions, offering no insight into the processes necessary for those allocations to occur. After all, resources cannot allocate themselves; only people can do that, and to do this, they must interact with other people. The rules governing such interactions pertain to what we denote as property rights, which create the separation between mine and thine necessary for allocation through trade to occur (Alchian, 1965; Demsetz, 1967). The central and traditional conception within the
theory of property rights is the distinction between mine and thine, as illustrated by the separation between the owners of a concert hall and the clientele who attend performances. In addition, previous contributions to the literature on property rights discuss the role of the individual right and its associated protections in facilitating value creation (Berkowitz et al, 2013). The main focus of these works is placed on external protections to individual property rights. Others who follow this formulation treat property’s legal component as a method to facilitate capital formation (de Soto, 2000), which Kerekes and Williamson (2008) examined empirically. Williamson and Kerekes (2011), moreover, explain that, traditionally, informal institutions matter more than formal institutions for the protection of property rights. Formally speaking, the conceptualisation of property rights has shifted very little in the evolution of economics, as illustrated by the enduring presence of possession and transfer (Djankov et al, 2020) despite evolution in the objects that can be possessed and the terms on which those objects can be transferred.

Within this scheme of thought, politics plays an unavoidable role. The world does not receive its organisation wholly through private property and market interaction. The political element must be brought forward to account for the inability of alienable private property to account fully for the organisation of society. In addition to the distinction between mine and thine, socially, there exists an ‘our’ operating inside society. Within the classically liberal framework centred on private ordering in which the modern theories of property rights were fashioned, politics was construed as operating in a manner generally consistent with those liberal features, as James Buchanan and Gordon Tullock (1962; Buchanan, 1975) conveyed in conceptualising individuals as using their pre-existing rights of property to create a political entity to preserve and protect those rights. It is unlikely any established political apparatus acts in conformity with principles of unanimity among participants; nonetheless, the idea of a loss-minimising set of constitutional rules envisioning the state serving as best as possible to support allocations emerging through market interactions among participants holds a degree of analytical tractability.

As stated previously, for most theorists, ‘political economy’ is a compound noun formed by adding political activity to market activity. The prime analytical question concerns whether political action derives from market action to support the market’s operations, as Buchanan (1975) envisioned, or whether political action operates independently of and autonomously from market action, as Paul Samuelson (1954; 1955) and Carl Schmitt (1996 [1932]) envisioned. In this respect, Schmitt claimed politics constituted an autonomous realm of activity inside society. Political action might be limited by law, but those limits can never be specified to cover all possible situations, so some domain of autonomy always remains. Contrary to Samuelson’s claims that public goods cannot be supplied through markets because of failures of preference revelation, Buchanan (1968) showed how public goods could be supplied through market-like transactions, though of a complex nature. Governmental agents possess a degree of freedom of action that most market actors lack. While moral imaginations play a role in the operation of governments, as they do in markets, market participants also face real constraints on their actions. Things like the cost of acquiring goods for production or the prior investments made to fabricate specialised capital assets limit a firm’s opportunity set of feasible actions. On the other hand, governments experience constraint largely through the internal belief of political actors that they are, in fact, constrained. While in particularly messy situations, real
constraints can manifest for governments in their day-to-day operations, it is surely the content of the moral imagination that largely governs what a political entity can or cannot do.

Recognition of the entangled relation between polity and economy within society raises new questions about property rights. One can readily distinguish private enterprises from state enterprises, though only if analysing at the level of *de jure* observation. The situation differs once analysis enters the level of *de facto* explanation of the ways of the world. At this lower analytical level, prudent action entails political entities establishing connections and relationships with those allegedly separate market entities, sometimes adversarial and other times supportive. Likewise, a similar prudent action by market entities leads to the establishment of relationships with political enterprises, perhaps reluctantly along one margin of action, while excitedly along a different margin of action. The neatly ordered world of separable domains of politics and economics gives way to a messy world of entangled political economy along the lines that Richard Wagner (2007; 2016), Mikayla Novak (2018) and the essays collected by David Hebert and Diana Thomas (2021) explore.

An observer armed with the Samuelsonian distinction between public and private goods cannot reliably sort through the real world of goods, distinctly labelling them with one particular definition or the other, because many market entities supply public goods, while many political entities supply private goods. The public–private classification might be useful for conveying some theoretical principles, but it is not truly capable of providing navigation through or explaining the realistic operations of the *de facto* world of actual goods. Both markets and governments provide venues for the supply of private and public goods. One can as readily find markets organising the supply of public goods as politics organising the supply of private goods. Recognition of the entangled quality of politics and economics forces us to explore property rights from a perspective wherein they might be described as contemporary conventions, always subject to change along any of numerous margins of potential controversy, but not as durable features of some mythical social contract.

A theory of property operating only with the distinction between mine and thine (Wilson, 2020) allows for the creation of a formal analytical framework, but that formal framework is not sufficient by itself to populate the social world with substantive objects of action: it can explain why theatres operate with both open and reserved seating without explaining the relative amounts of each in particular settings. The distinction between mine and thine is unambiguous; the category of ‘ours’ is inherently ambiguous. In this respect, taxation and regulation can transform a mine and thine into an ‘ours’, or vice versa, dividing something held in common into individually owned units. Social contract theories seek to render this transformation agreeable to all and result in presenting just another, though more complex, transaction with private property as part of a quest to bring all of society under the rubric of voluntary action. However, duress is also a recognisable and vital concept. One can agree to a contract under duress because such a contract is superior to the alternative, yet a contract agreed to reluctantly is not identical to a voluntary contract (Ellsberg, 1956). This duress can be fronted by any number of potential actors, political or market, but plays a critical role in shaping both the moral imaginations of individuals and their perceptions of what is possible with their property. This duress or threat of coercion will necessarily shape the evolution of property rights in social, practical and legal senses.
What model do we use to initiate an economic analysis of property rights? Buchanan (1975) summarised a prominent analytical motif by positing a set of individuals who pooled their insecure rights of property to establish a political entity to protect and preserve those rights. In this construction, a sequential direction of conceptual movement from individuals to groups exists. Despite the prominence of this hypothetical transition among economists, the anthropological and historical record is one of movement from membership in groups to establishment of individual identity and property rights. This line of thought springs from recognition that humans always live within groups, as Henry Maine (1861) and Norbert Elias (1982 [1939]; 1991 [1939]) illustrate. Given the reality of this situation, one can argue that the conceptual sequence of defining property rights does not begin with a determination of mine and thine, and then transition to a conversation about ‘ours’. Instead, it should surely initiate from the group position, the ‘ours’, and proceed to describe how individual actors manifest concepts of mine and thine from that initial position. While a model of Robinson Crusoe can be useful to illustrate some forms of economic calculation, meaningful economic analysis with a multitude of Crusoes must surely derive mine and thine from ours.

What might we learn from exploring and pondering these and numerous other instances? One obvious insight is surely the non-absolute character of property rights. At any moment, the pattern of property rights might be described as a settled convention, but this description simply asks us to then explain the content of the convention and its changes through time. By convention, there might exist a menu of expectations that people hold regarding the actions they undertake and the reactions from other people they expect to encounter. We can freeze those expectations in our minds and describe them as entailing a state of equilibrium. However, it is highly unlikely that in a world of 7 billion people or a nation of 350 million, everyone holds a congruent set of expectations. Almost surely, there will exist people who insert challenges to those expectations into the societal environment. Some will likely be repelled but others embraced, at least by a sufficient number of people to keep the challenge alive (Latour, 2005). A person’s right to property and the collection of uses available to said property is supported by forbearance from the remainder of that society. Should that forbearance weaken or vanish, the range of property rights will shift in consequence. In other words, the range of forbearance seems to be a form of choice, not some genetic feature of humanity. With this in mind, the only truly constant aspect of property rights is their continual evolution along numerous margins of contestation. If so, it is not so much some formal and eternal properties that characterise property rights, but rather the social configurations that form to protect or to challenge particular understandings of the substance to which property rights pertain. Traditional theory is not well equipped to account for this churning of meaning along myriad particular margins of action. For instance, do such enterprises as Google or Twitter operate under traditional conventions of private property, in which case, they are simple suppliers of consumable services? Or, are they intermediaries in promoting churning in the substance to which property pertains, in which case, they might possess features that resemble public utilities? The vision from entangled political economy would recognise that this question could be answered either way at any particular historical moment, depending on the effectiveness of interested parties in marshalling economic interests and moral imaginations. Due to the multiple viable approaches to organisation possible at
any given moment, the natural question arises as to why one emerges over some alternative. To this end, within the entangled approach to public finance, the role of interaction between agents of various organisational structures and the broader macro-level social context becomes central.

**Societies as networks of interaction and contestation**

Most economists conceptualise societies as fields of interaction in which any action quickly diffuses throughout the entire group. In contrast, we conceptualise societies as networks of interaction, along the lines Jason Potts (2000) sets forth. With networks, action is initiated at some particular node, and how far or fast it diffuses through the society depends on both patterns of connection among the nodes and the acceptability of the object being transmitted. Network-based models require theorising in terms of both actions undertaken at particular nodes and the social or network properties emerging from those actions and interactions. The classic theoretical construction of property rights only considers action taken at the individual level relative to another individual. Our construction attempts to provide systematic considerations of property rights, in which the individual often stands at the mercy of the broader society and network.

It is a simple, albeit highly imperfect, matter to describe property rights by the image of boundaries, as illustrated by drawing a line in the sand to separate mine from thine. However, such separation cannot comprise a satisfactory theory of property rights because it leaves unaddressed how mine and thine combine to form ours, as well as the parliamentary principles and institutions governing both the creation of and access to that ours. Property rights emerge within some social process in which many people participate. No descriptive point is served by assuming everyone agrees about the outcome constituting a ‘good’ social process. The right of homeowners to repel invaders might have seemed absolute after centuries where such uses of force were invariably accepted by policing and legal authorities. Yet, at one moment, a public prosecutor decides to prosecute someone who repelled a home invasion. Should that prosecution prove even partially successful, the very meaning of property rights will undergo modification among some of its myriad margins. After all, property rights are conventional and not absolute, with what they entail in specific instances being ultimately governed by public sentiments, with Norbert Elias (1982 [1939]) and A.T. Denzau and Douglas North (1994) describing these sentiments in terms of social definitions or mental models, each a valid interpretation of public sentiments. These sentiments are mediated through a complex array of institutional arrangements impinging on this situation. Lines drawn in sand can easily be redrawn and even lines etched in granite chiselled away. A de jure conception of property rights might lead to treating property rights as absolute, or nearly so; however, a de facto conception recognises that nothing endures forever. The time span of human life remains vastly shorter than the time span over which plate tectonics do their work, yet both are equally real in their impacts or lack thereof for a given period. The traditional additive scheme of political economy is surely useful for many analytical purposes, but in an equally sure manner, it provides inadequate navigational guides through the societal minefields that are features of modern societies.

To incorporate entanglement into the analysis of property rights, some shift away from the conventional framework of separation between polity and economy is
necessary. Consider a simple exchange between private and public enterprises directed by individual actors internal to each respective organisational entity. Each party to this transaction possesses something the other values. The political actor seeks gain, in whatever form it may take, including political contributions, recognition among their electorate for the next cycle, new sets of extraction opportunities or any number of other possibilities. All of these items are either directly or indirectly provided by a market actor or facilitated via changes to the broader economic system. The market actor seeks a property right, additions to their opportunity set for an already-established right or subtractions from another individual’s property right, which the political actors possess the possibility of changing.

This type of trade differs from the common conceptualisation of economic exchange. A politician and businessperson cannot simply exchange goods. This inability thus requires the development of alternative mechanisms. To reiterate from the earlier discussion, the key item of significance for the formation of property rights lies in the costs of externalities and benefits of internalisation (Demsetz, 1967). In this formulation, the actions of others in the market environment drive the viability of the individual’s property rights. The individual, to a large degree, passively awaits the ability to declare what is theirs. Here, the role and power of the state impacts property rights. The politician, and state more broadly, possesses the ability to alter the costs associated with the valuation the market actors face. For instance, creating external costs raises the relative price of an externality, while dissipating rents internal to the firm alters the cost of internalisation (McCchesney, 1987). In the traditional framework, the state provides enforcement in the broad top-down sense. Within the entangled framework, the state instead holds the role of active participant and the power directly to shift the costs and gains to other participants within the market environment. By utilising this ability, the political entity creates, augments or destroys property rights, all of which are outcomes that would not have ‘naturally’ occurred without political involvement. Market actors pursue these possibilities as new opportunities for gain in conjunction with similarly motivated political actors.

The mechanisms discussed earlier constitute only a single margin of difference. Another important component separating the inner workings of this exchange from the common market framework is the triadic character of entangled interaction (Podemska- Mikluch and Wagner, 2013). This triadic character of entangled interaction necessarily establishes a more encompassing collection of interests. In the market, individual exchanges entail gains for each party. With the triadic interactions associated with entangled political economy, a dominant coalition can overpower and impose costs on the remainder of society – a reference to the duress mentioned earlier. What was a voluntary exchange becomes a systematic imposition in which some gain and others lose. The public choice literature commonly discusses the challenges that such state rent-creating behaviour generates, including transitional gain traps (Tullock, 1975), increased losses from competition for rents (Krueger, 1974) and unmeasured losses from policies (Tullock, 1967). Painting these behaviours as some type of negative outcome of state power and presence, the common view argues for the elimination of these special privileges. However, this exhortation implicitly entails an additive political economy, whereby political power reflects the exogenous imposition of state action upon some collection of market actors. In contrast, entanglement treats the deployment of state power as reflecting some coalition among political and market actors. The entangled framework provides two important analytical tools
that the additive framework lacks. First, ‘rent-seeking’ behaviour is not so much an external imposition of state into market as an outcome of a social mechanism that evolved alongside modern society, implying that it naturally can and will be used. Therefore, any analysis of ‘market’ or ‘state’ processes must acknowledge and depart from this fact, rather than dispute it. Second, and building from this first insight, if the mechanism discussed is emergent and not chosen, and if it continues to be employed, then this persistence suggests that it holds at least some comparative advantage to any alternative present in the system. With these unique traits now established and the general mechanisms outlined, an analysis of what kinds of micro-level property rights will emerge can begin.

With entanglement, politically supported action will entail gains for some individuals through market transactions while imposing losses on other individuals. This outcome can manifest in a multitude of particular ways, even at the level of constitutional analysis, as Runst and Wagner (2011) show in exploring the evolution of constitutional interpretation through continual contestation. The state might directly impose a cost or award a subsidy to the holders of particular property rights, with those costs or subsidies manifesting through changes in ownership value. This form of state action directly fits in the classical formulation of property rights, where the state supplies the framework from which market interaction subsequently unfolds. Political action can also affect the value of private property rights by coordinating the value of complementary activities. The value of drilling equipment, for instance, can be affected by political action that influences the uses to which such equipment can be put. Political and market actors each hold interests and negotiate over the items described to arrive at suitable bargains. The fact of such negotiations as a feature of entanglement entails recognition that property rights are continually subject to contestation along some margins, which translates into the realisation that conventions exhibit a good deal of permanence and yet are continually undergoing change along some margins.

More directly, the property rights born from such a process of entanglement likely appear different than the ‘natural’ formulation. In light of this consideration, in conjunction with the triadic nature of entanglement, the rights emerging from entanglement require long-run horizons to reach maximal value, which, in turn, requires systemic connectivity to other rights. This pattern of connection among rights occurs for two reasons. First, the market rights, passively developed, generally hold some tradeable value or component that ownership facilitates. The classic fur-trade story (Demsetz, 1967) provides a clear example. Rights emerging from a negotiation likely do not hold this same initial and immediate tradeable characteristic, otherwise the market would have already created them. Hence, the immediacy of the gain cannot be present. Second, the triadic nature of entanglement requires the involvement of a higher number of individuals. As such, each person involved must make a value judgement to satisfy their self-interest. This sequential procedure requires that a right stand advantageous to a multitude of individuals with heterogenous goals and interests. Therefore, these rights generate value and gain on a number of viable fronts at once due to the increased connectivity to other rights. Of course, the market actor cares not for these additional value-added considerations, only that the individual right emerges. The various political actors do not adjust their plans out of charity for others. However, through these stages of negotiation and cooperation, a property right with enhanced aspects compared to the pure market procedure evolves. This
process does not occur for only a single instance. Rather, it operates continuously to shape the substantive content of property rights in a society. The contestation, adjustment and reformation of property rights has broad implications for social and economic systems, as we shall now examine.

Entangled property rights: systemic implications

Our preceding analysis of micro-level entanglement between political and economic organisation within society has identified two features of property rights that are unique to the entanglement perspective: first, property rights require durability, in particular, on longer timescales, if they are to provide value to their supporters; and, second, securing that durability requires the development of connections with other forms of property rights, through both political and economic means, to withstand predation from political coalitions comprised of both market and political actors. In this manner, particular property rights become advantageous to subsets of market and political supporters. We do not suggest that the market process is incapable of generating property rights with these characteristics. To the contrary, both reason and evidence support recognition that pure market mechanisms can facilitate the evolution of property rights, such is the classic theory. Our point rather stems from recognition that societies always entail and utilise both market squares and political squares in some fashion (Wagner, 2007), and often in unison. Hence, entanglement is a feature of all organised societies as a formal matter. To be sure, the substantive properties of entanglement can play out in widely different ways, as historical observation shows. However, from even the generic form of entanglement, observable systemic properties emerge.

Property rights become ever-more dependent on and connected to one another. As time passes, most, if not all, individuals come to develop a greater interest in the choices other people make with their property, due to the simple logic of entanglement within a network context. Individual actions come to possess broader value implications than they possess within a passive market framework. Property rights become less of a divider between mine and thine, and more accurately described by a network in which the nodes, and the property rights held within those nodes, connect to one another in a multitude of unexpected and unforeseeable ways. Furthermore, these connections provide the functional purpose for the vested interest of others in the opportunities available for property that they do not hold. In this way, individuals operating inside both political and market organisations face incentives to take active roles in shaping the property of others because of the connectedness of the network. Here, the contestation mentioned earlier attains its full realisation. Property rights become limited or expand in available opportunity, and transition from public to private, or vice versa, all at the behest and action of individuals within market and political organisations acting together. The network of rights continually evolves, shifts and changes. The positioning of nodes within this network stands as an important item to consider in the entangled scheme of analysis. In traditional network theory, the centralisation of specific nodes can generate unique behaviours and outcomes, determining the robustness of a particular system or the speed with which some resource can spread. The network of property rights is no different. Certain property rights facilitate the spreading of resources throughout the system more effectively than others. For instance, organisations located at the edge of a network, while still connected to other nodes, will direct fewer resources than
more centrally located organisations. The more central a node within a system, the
denser the connections and the greater the value and return it affords the holder.
With entanglement, the greater the degree of interdependence among property rights,
the greater the sensitivity of the resulting system. The removal or addition, as well as
opportunity adjustment, of certain nodes can have broad, reverberating implications
for the system’s capabilities and even survival.

Mancur Olson (1982) famously claimed that prolonged periods of peace could
be harmful for nations because they could facilitate the growth of pressure groups,
promoting, in turn, a form of institutional sclerosis due to the greater ability of interest
groups to defend themselves than to attack an opposing group’s previously secured
privileges. In many respects, Olson’s analysis of institutional sclerosis corresponds
to our analysis of entanglement, provided it is less costly to secure privilege than it
is to tear down the privilege that others have secured. Within Olson’s framework,
privileges accumulate over time as a feature of a democratic process. Wars ending
badly disrupt that accumulation, leaving the losing combatant with a shattered array of
interest groups that can provide a form of fresh start. When analysing these processes
through the lens of entanglement, one can argue that this process is a natural outcome
of the system and not some adverse consequence of state imposition or action. If the
system is predisposed to the generation of such an outcome, then special attention
must be afforded to the creation of the legal arrangements of property rights, or
nodes, in the societal network – a mode of analysis only possible when examining
the connectedness of property, rather than its mere existence.

The development of nodes does not necessarily entail the creation of specific
firms as holders of particular property rights, though such an outcome can occur.
Instead, entanglement affords the legal provision and framework for node creation
and the exploitation of opportunity. Hodgson (2015) strikes a similar distinction by
outlining the functional difference between the legal provision, that is, property, and
simply holding an object, that is, possession. Our work further amplifies how these
concepts evolve and influence one another in contestation to provide the mechanistic
operation of property rights. To invoke an example, the entanglement of market and
political actors determines the ownership of a shovel and its available actions, not
its physical manifestation or ‘real’ uses. A multitude of individuals can own shovels,
each a single node in the system.

Even further, shovels can be utilised for a variety of things, including digging
holes, moving gravel or murdering other individuals. Obviously, people beyond the
individual holder will have preferences over what actions are available to the owner
of the shovel, even if those actions remain a possibility inherent in the actual item
itself. Social boundaries, moral imaginations and legal changes prevent or impose
costs on certain actions and might functionally subsidise others, changing the holder’s
value judgement in determining the item’s use.

This separation between the social conceptualisation and the actual reality of the
item generates certain peculiarities. First, the shared concept of the property right
and its uses remain constant even when the actual object, organisation or use changes.
For example, an improved shovel does not suddenly become a bulldozer. It, and the
socially defined opportunity set contained within, remain consistent even with the
improvement. Second, changes to the social definition can generate real effects on
the opportunities and abilities of a property right, resulting in similar shaping for
other rights connected to it. As an example, one might consider healthcare in the US.
While there may or may not be traditional efficiency gains to its operation as a free market or a state-owned endeavour, the social definition of what a person is owed or deserves when in a compromising health position imparts real effects in the healthcare system and the use of property rights it contains. In other words, returning to systemic considerations, the addition, removal and alteration of nodes can induce sweeping real effects. These adaptations change the productive capabilities of the network and direct more or fewer resources throughout its reach, either promoting more node creation and connection or muting its potential. However, the aforementioned process considers only half of what is a feedback loop running from the social to the actual.

The actual also necessarily impacts the social existence and definition of property. This type of feedback imparts both positive and negative effects. On the one hand, the new discovery, application and transfer of nodes, connections or resources all enhance the system of property in an economy, allowing increases in the width and depth of the network, which provide important changes and improvements that entanglement is largely not capable of accomplishing. For example, discovering fossil fuels but lacking any knowledge of their potential uses will certainly lead to a different allocation and definition of property rights than one in which their ability to generate energy through combustion is known. In the latter world, by this discovery, not only will new social definitions of fossil fuels be impacted, but a host of other real actions in other social squares will also now become possible and their social definitions altered. By expanding the real capabilities of a particular item, the social formulation of the property right can also expand. However, with connectivity comes increased cost from disruption.

The very advantage and increased power that the system of property unlocks also enables far greater risk through connectivity. These actual shocks reverberate throughout the totality of the network, causing increased damage. These damages alter the actual utilisation of the property rights and can disrupt the collection of rights themselves. The social definitions of the property rights impacted will change and thereby alter the future capabilities of the network more broadly, assuming it survives. These systematic traits and implications for the ‘ours’ of property will necessarily result in action along a number of margins. For example, consider a particularly large shock rocking the financial system and leading to widespread damage throughout the economy. Even further, it is then found out that specific behaviours and actions at a collection of banks resulted in the shock because of the owning actors’ use of their property. In this situation, it can be anticipated that the social definitions of the property rights that banks have in terms of capital usage, reserve levels or acceptable risk will change as both political and market actors seek to ensure that the banks’ actions do not further damage the sphere of ours, that is, the network of property rights. This single example provides only a glimpse at how the consideration of property must incorporate and acknowledge the entangled nature of our society and the importance of contestation over time in shaping its evolution and development.

Closing thoughts about public finance and entangled political economy

Antonio De Viti de Marco (1888) initiated what became a roughly half-century flourishing of a distinctly Italianate orientation towards the theory of public finance when he published a book that would read in English as The Theoretical Character of Public Finance. Over the following half-century, de Viti issued several expansions on
that initial work until 1934, when his initial book had more than doubled in length, with this 1934 book translated into English as *First Principles of Public Finance* (De Viti de Marco, 1936). In the Preface to the English translation, de Viti explained that he sought to treat public finance as a theoretical science, in contrast to the standard conception of public finance as concerned with problems of practical statecraft. Amilcare Puviani (1903) was one of the Italian theorists who pursued de Viti’s desire to transform public finance into a field of scientific study. Gunter Schmölders, prominent for work on fiscal psychology, sponsored a translation of Puviani into German (Puviani, 1960 [1903]). In the Foreword to the translation, Schmölders explained:

Maffeo Pantaleoni (1911) provides a highly imaginative treatment of public finance from the perspective of comparing two systems of economic organisation. One was a system of market pricing, which Pantaleoni took to be represented by marginal cost pricing following the analytical conventions of the time. The other was a political price system, which Pantaleoni took to mean that political prices were extracted through a flat rate of tax on all income. Within Pantaleoni’s framework of additive political economy, any change in a tax rate is a change in the pattern of property rights. An increase in the rate of tax is a transfer of property rights from private property to a collective commons managed by a political entity. Within public finance pursued as a scientific enterprise, the processes through which the abstract human distinction between mine and thine materialises, and the processes through which an ‘our’ is established, are the central phenomena of interest for a theory of public finance; moreover, Wagner (2018) examines the contributions James Buchanan made to the *Journal of Public Finance and Public Choice* in promoting this Italianate orientation towards the theory of public finance.

The conception of an entangled system of property rights opens up new insights for exploring the public finances within complex socio-economic systems, where contestation is continually in play in shifting the place of ‘our’ within the mine–thine dichotomy. Whereas the traditional view of property outlined a passive market-driven process, the scheme of entangled political economy recognises the active roles of both market and political actors in shaping the evolution of property rights. Building upon this recognition, some broader systemic implications emerge. In this respect, this article accomplishes three tasks. First, it acknowledges that property is not something held as a singular entity or unit until the holder chooses to sell it, for property rights are subject to struggle and contestation along numerous margins. Through such struggle and contestation, the substance of property rights is redefined, altered and reinterpreted. Property rights become not a piece of data, but a process through which particular meanings of property rights emerge.

Second, the article defines the various mechanisms at the micro-level for state and market actors to utilise in actively forming a property right. While utilising the
classical framework as an initial point of analytical departure, it expands to include other potential methods of negotiation that shape the property rights that emerge from within an entangled system.

Finally, the article briefly describes the vast array of macro-level systemic implications stemming from the dependence of particular property rights upon the value of other particular instances. This system of property rights constitutes a form of network that is subject continually to change as political and market participants probe for increased value among the manifold margins along which participants can create and capture value. Our reference to manifold margins is a nod to the complexity of the substantive properties of a system of property rights, in contrast to the simplicity of the formal notion of property rights. A circle is a simple figure that has a definite circumference; a Koch snowflake resembles a circle, only it is a complex figure that has an indefinitely long circumference. In this article, we have sought to lay the foundation for an alternative conceptualisation of property rights within a system of entangled political economy. This alternative conceptualisation is still steeped in the purposive action of individuals within both the state and market enterprises that cooperate, bargain and contest with one another to secure their various plans. Our embrace of a scheme of entangled political economy in place of the additive scheme of political economy points towards new analytical territory for future research.

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Conflict of interest
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