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# INTERNATIONAL CUSTOMARY LAW AND ARTICULATION THEORIES: AN ECONOMIC ANALYSIS\*

*Vincy Fon\*\**  
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## I. INTRODUCTION

While there are those who know much about the creation of societal norms of behavior, there is much that is unknown. Significant work remains to obtain a full understanding of how such behavioral regularities emerge. This article contributes to the field of custom formation by modeling the process of customary law formation under different legal doctrines and regimes. Such modeling is particularly important considering the fact that legal scholars have recently criticized the traditional explanations of customary law as being tautological, non-descriptive of actual practice, and unable to provide meaningful normative guidance in the adjudication of customary rules. Most recently, Goldsmith and Posner (1999, 2000) have critiqued traditional customary law theories and suggested that customary rules emerge out of a coincidence of interest rather than a sense of legal obligation.<sup>1</sup>

This article begins by considering the extent to which the coincidence of the states' normative interest is sufficient to yield efficient rules of customary law. In modeling the formation of customary rules, the authors pay close attention to the timing of a

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\* This article builds upon research in the George Mason University Working Paper Series by the same authors (Fon and Parisi 2002).

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<sup>1</sup> Goldsmith and Posner (1999, 2000) question theories of international law that base custom on some sense of exogenous obligation by the states.

state's articulation of its beliefs and the timing of its action. This article builds upon the findings of D'Amato (1971, forthcoming) and Parisi (1998), extending the analysis to consider new theories of customary law formation, with special emphasis on the role of articulation.<sup>2</sup>

Under traditional customary international law theory, a tenet of international law becomes a viable norm only when (1) the tenet is widespread in practice and (2) it is rational for each individual member of the relevant international community to follow the tenet at each point in time. In contrast to this traditional theory, this article offers an extension of existing articulation theory that allows states' articulations to anticipate the element of practice, thus letting international state actors signal how they might wish the norm to develop before any specific incidence of conflict occurs. States fulfill the articulation component by making "announcements" of their intentions: announcements that they may make through formal unilateral statements as well as through bilateral or multilateral informal understandings.

This article shows that while customary norms are often capable of supporting cooperative behavior by participating states, outcomes resulting from reliance on traditional customary norms may systematically fall short of what might be obtainable through articulated norms. The key reason for this shortcoming is that customary norms necessarily require a "first mover" to begin the custom; however, such custom-initiating actions will only take place in a context where the action is necessary. In such settings, state actors' preferences (and resulting actions) are inherently biased by the immediacy of the situation, and thus any custom that begins is unlikely the best outcome.

In contrast, an articulation norm can commence in the abstract—outside the context of an imminent emergency. The

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<sup>2</sup> According to these theories, in the process of ascertaining the existence and content of customary rules, the states' statements and expressions of belief are relevant. D'Amato (1971, forthcoming) considers articulation as a formative element of international customary law. In D'Amato, this element operates in conjunction with state practice and abstention. This article utilizes D'Amato's concept of articulation, but pushes this notion beyond its originally intended scope. The model of articulation processes that this article develops allows states to express their consensus over potential rules prior or concurrent to the time of their action through practice. When articulation occurs before any customary practice, articulation can replace actual action and by itself generate a rule of customary law. In both cases, custom emerges when states undertake an action that is consistent with their expression of normative views contained in their prior or concurrent articulations.

acting states are thus separated from the type of role-specific context that often clouds and biases customary norm formation. Consequently, articulated norms are much more likely to produce outcomes that are closer to ideal. Moreover, norms resulting from articulation are more likely to satisfy states' participation constraints at any given time than are customary norms. The economic model explained below corroborates these results and suggests that a norm's strength depends on environmental parameters with predictable effects. These parameters include discount rates, the costs of custom compliance relative to the benefits obtained when other states comply with the custom, the number of participants, time delays, and uncertainty. Since customary norms tend to depend more crucially on these parameters, they are much harder to support than articulated norms.

The structure of this article is as follows. Part II will present the traditional doctrines of customary law, which provide the legal framework for customary law formation. Part III will model the traditional custom-formation process for the case of bilateral custom and will extend the bilateral custom model to multilateral custom cases. This Part will focus specifically on situations involving uncertainty and delay in the formation and recognition of an emerging custom and how such situations affect states' participation and effort incentives. Participation and effort incentives are instrumental in identifying the limits of the traditional customary processes in real-life conditions. Part IV will revisit these limits by examining the potential role of alternative doctrines and processes of customary law formation in mitigating the shortcomings of traditional customary law theory. This Part will introduce a variation in the custom-formation process by which states express consensus over emerging rules of custom before actually establishing customary practice through action. Part IV will also model the custom formation process under these alternative doctrines and will identify the respective limits and advantages of the alternative frameworks of custom formation in different environmental settings.

## II. THE FORMATION OF CUSTOMARY LAW<sup>3</sup>

Relatively few principles govern the formation of customary law. The theory of customary law defines custom as a practice that emerges outside of legal constraints, which individuals and organizations spontaneously follow in the course of their interactions out of a sense of legal obligation.<sup>4</sup> Over time, two or more individual actors embrace norms that they view as requisite to their collective welfare. According to traditional theories, an enforceable custom emerges from two formative elements: (a) a quantitative element consisting of a general or emerging practice; and (b) a qualitative element reflected in the belief that the norm generates a desired social outcome.

### *A. The Quantitative Element*

The quantitative requirement for customary law formation concerns both the length of time and the universality of the emerging practice. With respect to the time requirement, there is no universal minimum time duration required for the emergence of customary rules. Customary rules have evolved from both immemorial practice and single acts (Tunkin 1961). Nevertheless, French jurisprudence traditionally requires the passage of forty years for the emergence of an international custom. Similarly, German doctrine usually requires thirty years for an international custom to form (D'Amato, 1971, 57). Naturally, the longer the formative stage of a custom, the less likely it is that the custom effectively provides a viable substitute for formal law or treaty agreements or adapts to changing circumstances over time.

International legal theory is ambivalent regarding the condition of universality. Charney (1986) suggests that the system of international relations is analogous to a world of individuals in the state of nature thereby dismissing the idea that unanimous consent by all participants is required before binding customary law is formed. Well-accepted restatements of international law require consistency and generality—not universality—for custom

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<sup>3</sup> Part II builds upon research presented at the American Political Science Convention by Francesco Parisi (2000).

<sup>4</sup> For example, see Article 38(1)(b) of the Statute of the International Court of Justice, and Restatement (Third) of the Foreign Relations Law of the United States, § 102(1).

formation (D'Amato 1971; Brownlie 1990). Recent international law cases restate the universality requirement in terms of a norm experiencing increasing and widespread acceptance. Notably, these cases allow special consideration for emerging general norms and local clusters of spontaneous default rules that should become widespread over time. However, where fluctuations in behavior render it impossible to identify a general practice, the consistency requirement is not met.

Furthermore, with regard to rules at the national or local level, the varying pace at which social norms transform suggests that there is no way to establish a general time or consistency requirement as an across-the-board condition for the validity of a custom. The stochastic origin of social norms anticipates some variance in individual observations of practice. A flexible time requirement is particularly necessary in situations of rapid flux where exogenous changes are likely to affect the incentive structure of the underlying relationship.

The findings of this article shed light on the appropriate design of customary processes and provide guidance in adjudicating customary rules with respect to both issues of timing and consistency of application.

### *B. The Qualitative Element*

The phrase *opinio iuris ac necessitatis*, which describes a widespread belief in the desirability of a practice and the general conviction that the practice represents an essential norm of social conduct, generally identifies the second formative element of a customary rule. This element often finds definition in terms of necessary and obligatory convention (Kelsen 1939, 1945; D'Amato 1971; Walden 1977).

The traditional formulation of *opinio iuris ac necessitatis* is problematic because of its circularity—it is quite difficult to conceptualize that law can be born from a practice that most already believe to be required by law. The traditional requirement that participant states must believe in the normative principle embedded in the emerging practice (*opinio iuris*) may have arisen in response to game inefficiencies as a belief of social obligation to support behavioral rules that avoid aggregate losses from strategic

behavior.<sup>5</sup> This article considers Goldsmith and Posner's (1999 and 2000) critique of *opinio iuris*, according to which rules of customary law emerge out of a coincidence of interest rather than a sense of legal obligation. It builds on Goldsmith and Posner's insightful critique in an attempt to verify the extent to which coincidence of states' normative interest may be sufficient to yield efficient rules of customary law.

### III. A MODEL OF CUSTOMARY LAW FORMATION

Customary rules emerge from past practice. Prior to the consolidation of a practice into a binding custom, states engage in actions on a purely voluntary basis.<sup>6</sup> Two main factors influence an individual actor's choice to engage in a given action: (a) the immediate costs and benefits of the action (i.e., circumstantial interest); and (b) the interest that the actor may have for the future in establishing a binding customary rule (i.e., normative interest). The distinguishing characteristic between an emerging custom and a mere usage is that emerging customs include the belief that the current practice may lead to a binding customary rule. Such normative expectations contribute to and influence states' actions.

The relative importance of circumstantial and normative interests in influencing states' actions varies with specific situations. In some cases, circumstantial interest is of decisive importance—for example, states may engage in a specific action to satisfy their immediate interests, regardless of their expectations that the action may generate a binding rule for the future. In other cases, normative interest dominates, as when states engage in a certain activity in order to establish a binding custom that will govern future interactions.<sup>7</sup>

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<sup>5</sup> The practical significance of this requirement is that it narrows the range of enforceable customs—only those practices recognized as socially desirable or necessary would eventually ripen into enforceable customary law. Once there is a consensus that group members ought to conform to a given rule of conduct, a legal custom can emerge when some level of spontaneous compliance with the rule is manifest. As a result, observable equilibriums that are regarded by society as either undesirable (e.g., a prisoner's dilemma or an uncooperative outcome) or unnecessary (e.g., a common practice of greeting neighbors cordially) will lack the qualitative element of legal obligation, and therefore will not generate enforceable legal rules.

<sup>6</sup> Notably, customs are not all formed voluntarily; Goldsmith and Posner (2000) discuss the use of coercion by a powerful state to impose rules of international law.

<sup>7</sup> The authors make no claims with respect to the long-term stability of the rule that emerges. In fact, the analysis is perfectly consistent with that of Goldsmith and

While in some situations the motives behind states' action may converge, in other cases, possible tension exists between states' circumstantial and normative interests.<sup>8</sup> In the presence of such a conflict, the customary law formation process poses a cooperation problem. This article investigates the process of customary law formation in situations resulting from conflict between states' circumstantial and normative interests. In order to effectuate this analysis, this article makes certain assumptions, including the assumption that at each moment in time the circumstantial interest of one state is in conflict with the commonly shared normative interests of the other states. More specifically, this article considers the case of customary practices that create costs for one state while generating benefits for others, such that the total benefits exceed the total costs incurred by the participant states and the customary practice is therefore socially desirable. The social net payoff is the sum of costs and benefits for all states. Well-accepted economic analysis demonstrates that states determine the socially optimal effort level by equating social marginal cost and marginal benefit.<sup>9</sup> The following section of this article considers the extent to which customary law processes are capable of approaching a social optimum. Initially, this article's analysis addresses bilateral practices and subsequently extends the analysis to multilateral practices.

In practice, states are often faced with voluntary participation problems in the absence of existing customs. Such problems occur, in part, because voluntary participation in a new practice can impose costs on one state while conferring benefits on another. The following hypothetical situation illustrates this problem. Two states exist; the first state faces an emergency and the second state faces

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Posner (1999, 2000), who argue that the behavioral regularity will disappear if the normative interests of the nations change. This article, however, allows for the rule to have some short-term binding effects that constrain states from departing from accepted rules in pursuit of their circumstantial short-term interests.

<sup>8</sup> In some instances, following a given practice would satisfy both the circumstantial and the normative interests of the states. In other words, participation may be Pareto superior at each time period and all states would benefit from compliance with the custom during each time period. In these instances, following the emerging custom would always be a dominant strategy for all states. Consequently, such practices would become self-enforcing since no state would ever face a temptation to depart from them. Thus, the recognition and enforcement of such practices as rules of customary law would be unnecessary. These practices fall outside the scope of the present analysis since they would not pose strategic compliance problems.

<sup>9</sup> Appendix A1.1 demonstrates this principle.

the decision of whether to voluntarily rescue the first. Assuming that the marginal cost of the rescue activity is lower than the benefit, the cost-benefit analysis would render the rescue socially desirable. However, in the initial time period, if the second state were to undertake a rescue, it would bear a cost while the first state would receive a benefit. These immediate costs and benefits are the states' circumstantial interests.

Notably, the circumstantial interests of the two states have different signs. The rescuer's circumstantial interest is negative (i.e., the rescuing state expects to face a cost), while the rescued state's circumstantial interest is positive (i.e., the rescued state expects a benefit from being rescued). In this example, the choice of action (whether the rescue will occur) is in the hands of the rescuer, while the rescued state is a passive recipient of the benefit. Thus, when evaluating whether to undertake a rescue activity, it is sufficient to consider only the participation and incentives of the rescuer—the state that faces negative circumstantial interests.<sup>10</sup>

The analysis continues by assuming that the states will engage in repeat interactions. After the initial time period, the states' alternate and future roles (as rescuers or rescued) will be decided solely on a probabilistic basis. In each subsequent period, there is a probability that a given state will be the beneficiary of other state's activities (the probability of being rescued). On the other hand, there is also a probability that the state will continue to be on the giving side (the probability of again being the rescuer).

One possible outcome of the above-mentioned hypothetical is that the states follow socially desirable practices, subject to reciprocity. Here, reciprocity extends both to the participation in the emerging practice and to the quality or effort level of the reciprocating conduct. This outcome provides clarity in identifying the extent to which the acting state's normative interest may lead to action and customary practice; it assumes that the state can expect reciprocity at whatever effort level chosen by that state when it in turn needs rescuing.<sup>11</sup> These premises facilitate analysis regarding the extent to which the acting state's circumstantial and normative

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<sup>10</sup> In the more general case of customary practice, this analysis implies assuming away situations in which the initiators of the customary practice can create a benefit for themselves, regardless of the other states' participation and reciprocal compliance.

<sup>11</sup> For a more general model of reciprocity in cooperation problems, see Fon and Parisi (2003).

interests may lead to action and participation in the emerging customary practice.

In the above-mentioned example, a state would need to have its participation constraint satisfied for it to be willing to participate in the rescue venture.<sup>12</sup> For example, in the case of multilateral custom formation, not every individual state becomes actively involved or passively involved in the custom-generating practice. At any given time, a positive number of non-participants observe other states' activities without participating. These non-participating states may seem like acquiescing spectators of an emerging custom.

*A. Increasing the Number of Potential Participants to Custom Formation*

When the number of potential participants increases, the probability of a state's involvement decreases. The decrease in the probability of involvement leads to a decrease in the optimal effort level expended by the state. Likewise, as more participants become involved, it becomes harder to satisfy the participation constraint, making it less likely that individual states will take part in the formation of a customary practice. Both results have relation to the fact that the choice of initial participation imposes a present and sure cost on participating states, while the probability of future benefit-producing involvement with the emerging custom may decrease with the number of participants.

These results are consistent with the empirical findings of sociologists and anthropologists who have found that close-knit environments with small communities of participants provide the most fertile environments for the emergence of efficient customs (Ulmann-Margalit 1977; Parisi 1998; Ellickson 2001). Moreover, these results support Goldsmith and Posner's (1999, 2000) skepticism about invoking reciprocity to explain international cooperation in cases involving more than two states. Finally, these results have important implications for the adjudication of customary norms. For example, some could argue that courts should give great attention and enforcement to customs established in small or close-knit communities given the efficiency with which customary rules emerge in such environments. Likewise, local, regional, and special customs should enjoy at least as much

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<sup>12</sup> Appendix A1.2 shows the formulation of the optimization problem faced by the initial rescuer.

recognition, if not more, than general and widespread customary practices.

### *B. Introducing Uncertainty in the Formation of Custom*

Thus far, the custom formation model has assumed that later participants to the custom always follow the initial practice with reciprocal behavior. This assumption has allowed the effects of strategic participation and effort choices of the states to be isolated from the effects of uncertainty regarding the future participation and compliance of other states. In real-life settings, however, initial participants to a customary practice have no guarantee that their action will actually lead to the formation of a binding custom. Thus, a state's initial effort may not always meet with reciprocity, which may undermine the motivation of the initial action and frustrate the expectation of reciprocal behavior from others. Returning to the hypothetical rescue example, if the potential rescuer state has no assurance that its effort will meet with like behavior when fortunes reverse, this lack of assurance may compromise its incentives to offer voluntary rescue.

This section considers the conditions under which optimal practices emerge when the initial participant states have no assurance that others will reciprocate their practices. This analysis requires an extension of the previous model to include the possibility of uncertainty in custom formation. This model assumes a probability that other states will follow the practice originally undertaken by the state in question.<sup>13</sup> For example, in the case of multilateral custom formation, not every individual state engages actively or passively in the custom-generating practice. At any given time, a positive number of non-participants observe other states' activities without participating. These non-participating states can be seen as acquiescing spectators of an emerging custom.

### *C. Introducing Time Lags in the Formation and Recognition of Custom*

Finally, the analysis of traditional custom formation processes extends to consider the effects of time lags on the process of emergence and recognition of custom. Time lags and delays in the consolidation or recognition of a custom affect the time in which

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<sup>13</sup> Appendix A1.3 shows this variant of the model.

the initial participants are able to capture the benefit of the custom they initiated. Delays can occur for numerous reasons. For example, customs involving events of rare occurrence (e.g., a rescue in outer space or on the high seas) may result in custom formation delays. Similarly, delays can occur because of legal system norms; some legal systems require a long-standing practice of twenty or thirty years before the usage is recognized and enforced as a binding customary rule.

The longer the delay in the formation process or recognition of the custom, the lower will be the effort level rationally exerted by the initial participants. As shown in A1.3.2 in the Appendix, the presence of delays and time lags in the formation of the custom also affects the participation constraint. This implies that some practices that would have successfully evolved in the absence of delays and lags might fail to develop if delays or lags occur.

In sum, when states have a positive time preference and unaligned circumstantial and normative interests, delays in the formation and recognition customs may produce negative participation and incentive effects. The above-mentioned results further suggest that custom-related settings that entail infrequent state actions should require a lower number of observations, and thus a shorter waiting period, before the practice may consolidate as a binding rule. Otherwise, given the infrequency of action and delay in custom formation, states would heavily discount the benefits of future applications of the custom, and, as a result, would have less incentive to participate in custom development.

#### IV. BELIEF AND ACTION IN CUSTOM FORMATION: THE RELEVANCE OF TIMING AND ARTICULATION

Part III demonstrated that in situations where the circumstantial and normative interests of the states do not align, the following factors may have negative effects on the states' participation and incentives: (a) increases in the number of participants; (b) uncertainty in the future development of the custom; and (c) delays in the formation and recognition of the custom. These findings have important implications for the assessment of alternative mechanisms of customary law formation. This Part uses these findings to investigate whether the adoption of alternative doctrines of customary law formation can mitigate the shortcomings of traditional customary law processes.

This Part proceeds by considering an important variation in the custom formation process called articulation theory. This theoretical variant of traditional customary law processes allows states to express their consensus over potential rules prior to establishing custom through practice. Accordingly, custom emerges when states undertake action consistent with the expression of a belief contained in their prior or concurrent articulations.<sup>14</sup> This Part models the custom-formation process under such alternative doctrines and identifies the respective limits and advantages of these alternatives in different environments.

*A. Normative Interests and Circumstantial Interests in the Formation of Custom: The Role of Articulation*

Notable scholars have considered the conditions under which principles of justice can emerge spontaneously through the voluntary interaction and exchange of individual group members. As in a contractarian setting, the reality of customary law formation relies on a voluntary process through which community members voluntarily adhere to emerging behavioral standards and thus develop rules that govern their social interactions.<sup>15</sup> As discussed above, this custom-formation process becomes problematic when the states have unaligned circumstantial and normative interests. Although some notable legal theorists and practitioners have considered the requirement of *opinio iuris* in addressing customary

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<sup>14</sup> D'Amato (1971) allows for the alternative sequence of articulation occurring prior to or concurrently with the state act (practice). In D'Amato, however, not much emphasis is placed on the timing of practice and articulation for the understandable reason that international law treats the two elements as qualitatively different from each other (one is a physical act, the other is a human characterization). This treatment of practice and articulation renders any discussion of the temporal order between the two items mostly irrelevant under positive international law.

<sup>15</sup> In this setting, Harsanyi (1955) suggests that optimal social norms are those that would emerge through the interaction of individual actors in a social setting with impersonal preferences. The impersonality requirement for individual preferences is satisfied if the decision makers have an equal chance of finding themselves in any one of the initial social positions and they rationally choose a set of rules to maximize their expected welfare. Rawls (1971) employs Harsanyi's model of stochastic ignorance in his theory of justice. However, the Rawlsian "veil of ignorance" introduces an element of risk aversion in the choice between alternative states of the world, thus altering the outcome achievable under Harsanyi's original model with a bias toward equal distribution (i.e., with results that approximate the Nash criterion of social welfare). See Sen (1979); Ullmann-Margalit (1977); and Gauthier (1986) for further analysis of the spontaneous formation of norms and principles of morality.

law formation, many others have looked past the notion of *opinio iuris* and, instead, have concentrated on the elements of “articulation.”<sup>16</sup> Articulation theories capture the following two important features of customary law: (a) customary law is voluntary in nature; and (b) customary law is dynamic. According to these theories, in the process of ascertaining the qualitative element of *opinio iuris*, the theorists and practitioners should attentively consider states’ statements and expressions of belief. Individuals and states articulate desirable norms in order to signal that they intend to follow and to be bound by such norms. Thus, articulation theories remove the guessing process from the identification of *opinio iuris* and allow the manifestation of expressions of belief before or in conjunction with customary action.

Consider, for example, a hypothetical scenario in which articulation determines the content of emerging customary norms. In this context, articulation may be a way for states to pre-commit to the content and interpretation of an emerging international custom. Subsequent consolidation and custom enforcement would remain contingent upon the development of states’ future practices, but articulation would facilitate the coordination between states with respect to the emerging practice. Further, articulation can represent a way for states to recognize an emerging norm of international law even in the absence of concurrent state practice.<sup>17</sup>

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<sup>16</sup> In attempting to solve one of the problems associated with the notion of *opinio iuris*, namely the troublesome problem of circularity, legal scholars, most notably D’Amato (1971), have considered the crucial issue of timing of belief and action in the formation of customary rules. The traditional approach emphasizes the awkward notion that individuals must believe that a practice is already law before it can become law. This approach basically requires the existence of a mistake for the emergence of a custom: the belief that the law required an undertaken practice, when instead, it did not. Obviously, this approach has its flaws. Placing such reliance on systematic mistakes, the theory fails to explain how customary rules can emerge and evolve over time in cases where individuals have full knowledge of the state of the law.

<sup>17</sup> This formulation of the notion of articulation obviously encompasses different possible factual scenarios, not all of which would find a readily applicable treatment under positive international law. Under current law, the element of articulation is not sufficient in itself to constitute custom. If separated from practice, articulation processes would render custom formation similar to an informal legislative process, given the possibility for generating new rules of international law via the meeting of minds of state actors. This informal legislative process would be difficult to implement in a multilateral setting since it would potentially impose excessive costs on third party states in the monitoring and objection to states’ articulations. *But see* Military and Paramilitary Activities (Nicar. v. U.S.), 1986 I.C.J. 14 (June 27). Nevertheless, this

Consistent with the predicament of the economic models, articulation theories suggest that states should give greater weight to beliefs expressed before the emergence of a conflict.<sup>18</sup> When states face a tension between their circumstantial and normative interests, this would imply that states should give relevance to statements of belief (i.e., articulations) expressed by the states, even when articulations lack actual practice.

Before the contingent circumstances of the matter are known, states articulate rules consistent with their *ex ante* normative interests. They have incentives to articulate and endorse rules that maximize their expected welfare. This rule may not necessarily correspond to the *ex post* circumstantial interest of the states in a specific case and may fail to maximize their actual payoff when roles and circumstances are unveiled to the states. Thus, timing of relevant action is important to both participation and effort incentives. To illustrate the point, it is useful to consider again the working example of mutual rescue. Given some degree of uncertainty as to the future course of events, the states' normative interests easily align. A rule of mutual rescue clearly maximizes the expected welfare of the international community at large. Therefore, if asked in abstract as to whether their society should bind itself by a norm of mutual rescue, states would likely agree to bind themselves.

As previously seen in Part III, this type of mutual agreement may not necessarily occur under traditional processes of customary law formation. When individuals and states have the opportunity to manifest their beliefs only through action, their participation and incentive constraints may undermine their action. At the time of action, states have biased strategic incentives, which may fail to induce states' optimal participation under the circumstances. More generally, states will usually articulate rules that best fulfill their current circumstantial interests and welfare rather than the normative interest and expected welfare derived from an uncertain future. The aforementioned rescue example illustrates this principle. In the example, if those in need of rescue require too much effort, those called to provide the rescue may undersupply it. Thus, in the absence of previously accepted standards of conduct,

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pronouncement of the International Court of Justice has been readily criticized by D'Amato (1987, 101).

<sup>18</sup> Here, it is interesting to point out a strong similarity between the legal and economic models. Articulations that states make prior to the unveiling of conflicting contingencies can analogize to rules chosen under a Harsanyiian veil of uncertainty.

states will likely withhold or undersupply mutual assistance. In such a situation, if adjudicators were asked to choose between the behavioral standards articulated *ex ante* and standards advocated *ex post* by the states, they would favor the adoption and enforcement of the *ex ante* standards of conduct.

*B. Custom Formation with Prior Articulation  
of the Content of the Norm*

The analysis of this section builds upon the predictions of the previous section and considers the incentive properties of customary law processes that rely on *ex ante* articulations. First, this section explores a setting similar to that considered in Part III; however, it assumes that states have an opportunity to articulate the content of what they perceive to be a desirable norm before actively engaging in the customary practice.<sup>19</sup> During the initial period, the states specify a rule by means of articulation. In terms of the rescue example, the assumption is that participant states express their beliefs on the norm of rescue before their respective roles are unveiled. However, the future horizon for the states is unchanged. The probability  $\pi$  represents that states will benefit from the articulated rule, and the probability  $1 - \pi$  represents the likelihood that the rule will burden the state. This problem can thus be compared to the basic customary law problem considered previously. In this problem, a state's objective of current maximization has one less negative term since the endorsement of a hypothetical rule by means of articulation requires no practice or effort expenditure.

Articulation processes allow states to pursue their normative interests while avoiding any potential conflict with their circumstantial interests. In the traditional customary law case, the expected payoff from participation had to be greater than the opportunity cost of participating in the customary practice in order to satisfy the participation constraint. In the case of articulation, states also compare participation constraints against the opportunity costs. Notably, in the case of articulation, the participation constraint is less likely to be satisfied when it is more costly to undertake the activity or when the state's discount rates are higher, as shown in A2.1.1 of the Appendix. However, states are more

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<sup>19</sup> Appendix A2.1 shows formulation of the optimization problem faced by a representative state.

likely to participate when the benefits from reciprocal cooperation or the probability of their benefiting from the custom in the future are higher.

It is also important to determine the effort level that states will choose when participating in a custom. Careful analysis of states' incentives reveals an important difference between traditional custom-formation and articulation processes. Under articulation theory, the states' discount rates have no impact on optimal effort levels.<sup>20</sup> However, as previously noted, even under articulation theory the discount rate has an impact on the participation constraint. The higher the discount rate, the less likely it is that the participation constraint will be satisfied, and, consequently, the less likely it is that the state will join the custom-generating articulation. Notably, even though higher discount rates may undermine participation, if the states choose to participate they will choose optimal effort levels and advocate optimal rules.

The optimal outcomes resulting from articulation are a substantial improvement over the outcomes of traditional customary law processes. This improvement occurs because articulation processes, unlike traditional custom-formation processes, eliminate the incentives for states to understate their true normative interests by letting other states commit to a customary rule before their specific circumstantial interests are unveiled.

A mathematical comparison of the privately and socially optimal effort level under an articulation model demonstrates that two effort levels can be identical only if the probability of being a beneficiary of the emerging rule is one half.<sup>21</sup> This means that homogeneous states and unbiased role-reversibility are important prerequisites of custom-formation processes, even under articulation theories. Consequently, when probabilities distribute equitably, the privately optimal effort level equals the socially optimal effort level. This principle is also evident in the rescue example, which shows that when the probability of being rescued equals the probability of becoming a rescuer in the future, the states face incentives to articulate efficient rescue rules because the states will give equal weights to the expected costs and benefits of future rescue missions. However, this principle does not hold true when the states face asymmetric probabilities of being rescuers or victims. In cases of asymmetry, the private and social incentives

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<sup>20</sup> See section A2.1.2 in the Appendix.

<sup>21</sup> See section A2.1.3 in the Appendix.

will diverge and the diverging interests of the states will affect their resulting articulations.

In practice, lack of alignment between private and social incentives results because private individuals determine their optimal effort level by balancing the expected private marginal cost and benefits. Such optimal balancing takes into account the individual probabilities of receiving benefits and costs. On the other hand, in deriving a social optimum, states should not discount their marginal cost and benefits because of future probabilities. Instead, states should simply balance social marginal cost and marginal benefit without weighing social optimums since the *ex post* distribution of costs and burdens between the states is irrelevant. Consequently, the private optimum and the social optimum will only coincide when the probabilities are uniform for all players.

### *C. Articulation and the New Boundaries of Customary Law*

This section considers different attributes of custom-formation processes and evaluates the ability of articulation processes to overcome the shortcomings of traditional customary processes identified in Part III. This section also extends the analysis regarding the relative effectiveness of the different formative processes in facilitating custom-formation by first comparing the effect of articulation processes on the participation constraint and then considering the impact on the states' incentives.<sup>22</sup> Thus, the modeling and comparison of the participation constraint under articulation theories and the participation constraint under traditional customary law results in a model that implies that the participation constraint is more easily satisfied in the articulation case than in the traditional customary law case. Therefore, it follows that allowing potential participants to announce their participation in the emerging custom and to articulate the effort level they consider appropriate, *ex ante*, facilitates the customary law formation.

Similarly, states can engage in inquiries with respect to the content of the emerging custom, as symbolized by their chosen effort level. Under articulation theories, states do so by comparing the privately optimal effort that other states would advocate with

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<sup>22</sup> See section A2.2 in the Appendix.

the privately optimal effort level that they would choose under customary law. The optimal effort that states would rationally choose under articulation is greater than the effort that those same states would choose under traditional customary law processes.

States should also consider the workings of articulation processes in situations where a customary practice randomly draws the participants from a larger population. Additionally, states must assume that not every individual is actively or passively involved in the custom-generating practice.<sup>23</sup> Instead, at each period, a positive number of non-participants observe others' activities; the probability of being an active participant depends on the number of states involved as shown in the rescue illustration. The model assumes that the probability of a state being a participant in a rescue venture depends on the number of states available. It then compares the articulation results with those obtained in the case of traditional customary law, and an important difference becomes apparent. Under articulation, an increase in the number of participant states reduces the probability of a state's involvement in the articulation process of the rescue rule. However, as pointed out in A2.3 in the Appendix, even though an increase in the number of states may render participation less likely, once participation occurs, the states will undertake optimal effort levels and advocate optimal rules. This is a substantial improvement over traditional customary law processes that, as seen above, produce less than optimal effort levels due to pervasive strategic problems in multilateral settings.

Part III considered the conditions under which optimal practices would emerge, given uncertainty as to whether a binding rule of custom would evolve from the states' initial efforts. Here, that analysis extends to consider the effects of uncertainty in the case of articulation processes. As in the customary law case, the analysis assumes that other participants will follow the practice in question with a probability  $\beta$  in the future. As shown in A2.3.1 in the Appendix, an increase in the probability of customary formation increases a state's willingness to expend effort, and it has a positive impact on a state's willingness to advocate customary norms by means of articulation. The probability of custom formation thus affects both participation and incentives under articulation.

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<sup>23</sup> See section A2.3 in the Appendix.

Part III also observed that time lags and delays in custom recognition affect the time in which the initial participants are able to capture the custom's benefit when roles reverse. That analysis found that lags and delays could undermine both the participation and the effort incentives in a traditional customary law case, thus rendering traditional customary law processes ineffective at regulating events of rare occurrence.

Here, the analysis expands to consider the effects of time lags under articulation processes of custom-formation.<sup>24</sup> If after articulation has taken place a period of time elapses before the articulated practice consolidates into a binding custom with expected reciprocal benefits, then the parties are less likely to actively engage in the articulated practice. Hence, the presence of time lags negatively affects the participation choice under both traditional and articulation theories of custom formation. The longer the delay before any enforcement of the articulated rule takes place, the less likely that the state will actively engage in the articulation process. However, as shown in A2.3.2 in the Appendix, such a delay likely has no impact on the qualitative standards advocated by the states and the resulting rules of custom.

Notably, these results may originate from delays in rule implementation that decrease the discounted present value of the future payoff, thereby weakening the incentives for states to participate in the articulated venture. On the other hand, delays in future events do not alter the balance between expected benefit and expected cost in the future. Consequently, if states meet their participation constraints, there is no reason for them to alter their choices of optimal effort, no matter how long the delay. Additionally, articulation processes of custom formation improve upon the traditional processes with respect to states' incentives and the resulting qualitative content of the emerging custom.

## V. CONCLUSION

In summary, both strengths and weaknesses are evident in the customary law formation processes. Customary law is, in many respects, an effective source of law that generates rules based on the revealed choices of participating states. Notably, some settings are more congenial than others to the evolution of customary rules. Notwithstanding the historical successes of traditional customary

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<sup>24</sup> See section A2.3.2 in the Appendix.

law formation processes, some situations significantly undermine the effectiveness of traditional customary law. Such situations include: (a) increases in the number of participants, (b) uncertainty in the future development of the custom, and (c) delays in the formation and recognition of the custom. Each of these situations creates a negative effect on the states' participation and incentives.

These negative effects prompt an analysis of an alternative mechanism of custom formation, namely, articulation doctrine, which provides significant benefits over traditional theory. According to articulation doctrine, customs emerge when states formulate like-minded articulations before or in conjunction with customary practice. Most notable among the benefits of articulation theory is the greater ease with which customary rules emerge as a result of prior articulation. Likewise, articulation processes of custom formation always improve the effort incentives for participating states as compared to traditional processes. This improvement occurs notwithstanding the possibility of sub-optimal customs emerging in cases involving asymmetric probabilities.

Another significant advantage of articulated norms over traditional customary law is that articulated norms allow states to form consensus on a given norm without having to wait until a sufficiently large number of states recognize actions as uniform practice. This decreases the time of formation for customary norms—a potentially sizeable benefit, especially when the frequency of participant states' actions is intrinsically low. In fact, articulated norms provide some of the same benefits that treaty laws provide, including the formulation of rules before any instance of practical implementation. Consequently, articulation eliminates the first-mover problem that affects typical custom formation.

As illustrated above, however, articulated norms do not always guarantee the best results. Both articulated norms and traditional customary law avoid the costly and difficult process of treaty negotiation and ratification; they both could also diverge from the ideal, even when the ideal is otherwise feasible. In contrast, in cases of treaty-created law, full-fledged bargaining between states can take place, and this may lead to ideal outcomes even when asymmetric state preferences are involved. In addition, as with traditional custom formation, delays and time lags can negatively affect states' participation choices under articulation theories. Significantly, the longer the delay before enforcement of the articulated rule, the less likely that the state will actively engage in the articulation process. Nevertheless, notwithstanding their effect

on states' participation, delays and lags have no negative impact on the qualitative standards advocated by the states and the resulting rules of custom.

Another shortcoming of the articulation approach is the risk of poor coordination among participant states, especially during the initial stage of norm articulation. For example, if states make inconsistent initial articulations, this may compromise subsequent coordination between the states and, as a result, no clear norm will emerge. Traditional customary law, by looking at actual practice, avoids such risk because under traditional customary law, first movers' initial actions, not untried articulations, become the focal point for subsequent movers' actions. Thus, a customary norm only evolves where the observed practice reveals to participating states what is expected of them in the future, and consequently, coordination problems are minimal. When coordination problems are present, articulation processes may not effectively expedite the process of custom formation.

Clearly, the respective advantages and limits of the alternative regimes in different environments have important policy implications for the design of optimal customary law formation mechanisms. While this article focuses principally on the relative effectiveness of traditional and articulation methods for establishing customary law, further work on this subject should extend this analysis to persistent and subsequent objector doctrines and other principles that govern the formation of customary law. Notwithstanding the possibility of future analytical extensions regarding customary law formation, this article strongly suggests that articulated norms are much more likely to produce ideal outcomes and satisfy states' participation constraints than traditional methods.

## APPENDIX

*A1. Customary Law Formation**A1.1 Social optimum*

In each period, a state can expend an effort level  $e$  to generate some benefit for another state. The social net benefit from  $e$  is  $SNB = -ae^2 + be$ , where the marginal cost of effort  $MC = 2ae$  is an increasing function of  $e$ , and the marginal benefit of effort  $MB = b$  is assumed constant. In each period, the social optimal effort level  $e^S$  is given by  $e^S = b/2a$ .

*A1.2 Custom formation: bilateral case*

There are two states. In period 0, one state tackles the need to exert some effort to rescue the other state. If the state undertakes the rescue, it would bear cost  $ae^2$  while the other state would receive benefit  $be$ . Subsequently, the same two states are engaged in repeat interaction. After the initial time period 0, starting from period 1 to infinity, the states alternate roles. In each period, there is a probability  $\pi$  that each of the states will be the beneficiary of other states' activities, and there is a probability of  $1 - \pi$  that each state will continue to be on the giving side. If the states follow socially desirable practices, subject to reciprocity, in each future period, then  $\pi be - (1 - \pi)ae^2$  calculates the first state's expected payoff. If the state has a discount rate  $r$ , where  $r > 0$ , then the total discounted value of expected payoffs from future periods is:

$$\sum_{t=1}^{\infty} \frac{1}{(1+r)^t} (\pi be - (1 - \pi)ae^2) = \frac{1}{r} \cdot (\pi be - (1 - \pi)ae^2)$$

Since the choice of action is in the hands of the rescuer, not the rescued state, it is sufficient to consider the participation and incentives of the rescuer state. The following equation shows the problem facing the individual state with the rescuer responsibility in period 0 who may become either the rescued or rescuer in some future period:

$$\max_e P = -ae^2 + \frac{1}{r}(\pi be - (1 - \pi)ae^2)$$

The optimal effort level  $e^C$  is:

$$e^C = \frac{\pi b}{2a(r + 1 - \pi)}$$

Substituting the optimal effort value  $e^C$  into the objective of the state gives the following maximal payoff:

$$P^C \equiv P(e^C) = \frac{\pi^2 b^2}{4ar(r + 1 - \pi)}$$

*A1.2.1. Participation constraint.* In order for the state to willingly participate in the rescue venture, its participation constraint must be satisfied; that is,  $P^C \geq k$  must hold for some  $k$ . It can be readily verified that  $\partial P^C / \partial a < 0$ ,  $\partial P^C / \partial b > 0$ ,  $\partial P^C / \partial r < 0$ , and  $\partial P^C / \partial \pi > 0$ .<sup>25</sup>

*A1.2.2. Incentive problem.* From the optimal effort level  $e^C$  found in A1.2, the model suggests the following: (i) If  $\pi = 0$ ,  $e^C = 0$ ; and (ii) If  $\pi = 1$ ,  $e^C = b/2ar$ . Further, the following comparative static results obtain:  $\partial e^C / \partial \pi > 0$ ,  $\partial e^C / \partial r < 0$ ,  $\partial e^C / \partial a < 0$ , and  $\partial e^C / \partial b > 0$ .

### A1.3 Custom formation: multilateral case

Here, the model considers the case in which the probability of being a participant in a rescue venture depends on the number of available states  $N$  (where  $N \geq 2$ ). In this case there is a  $1/N$  probability that the state will be the rescuer, and likewise there is a probability of  $1/N$  that the state will need assistance from other states. This means that there is a residual probability of  $1 - 2/N$  that the state is just a bystander in each future period. The problem of the state then becomes:

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<sup>25</sup> For more details, see Fon and Parisi (2002).

$$\max_e P = -ae^2 + \frac{1}{r} \cdot \frac{1}{N} (\pi be - (1 - \pi) ae^2)$$

Note that  $N$  plays a similar role to  $r$  in the state's optimization problem. Hence, similar to the comparative static results  $\partial e^c / \partial r < 0$  and  $\partial P^c / \partial r < 0$  found previously,  $\partial e^c / \partial N < 0$  and  $\partial P^c / \partial N < 0$  now hold.

*A1.3.1. Introducing uncertainty.* The basic model can expand to include the possibility of uncertainty that is present in custom formation. Specifically, the problem assumes a probability  $\beta$  (where  $0 < \beta < 1$ ) that others will follow the practice undertaken by the state in question in the future. In this case, the private optimization problem is adjusted as follows:

$$\max_e P = -ae^2 + (\beta \pi be - (1 - \pi) ae^2) / r.$$

Thus, since the probability  $\beta$  plays a role similar to that of  $b$  in the optimization problem, the comparative static results are also similar:  $\partial e^c / \partial \beta > 0$  and  $\partial P^c / \partial \beta > 0$  hold.

*A1.3.2. Introducing time lags in the formation and recognition of custom.* Here,  $T$  represents the number of periods after the initial action but before the practice consolidates into a binding custom with expected reciprocal benefits. From period  $T$  onward, the states will act under a reciprocally binding rule of custom, such that one state may obtain the benefit of the rule or face the burdens of such rule, with probabilities  $\pi$  and  $(1 - \pi)$ , respectively. In this case, the discounted present value of the future expected payoff is:

$$\sum_{t=0}^{\infty} \frac{1}{(1+r)^{t+T}} (\pi be - (1 - \pi) ae^2) = \frac{(\pi be - (1 - \pi) ae^2)}{r(1+r)^{T-1}}$$

Thus, the problem confronting either state becomes:

$$\max_e -ae^2 + \frac{(\pi be - (1 - \pi) ae^2)}{r(1+r)^{T-1}}$$

Comparing the current problem with the basic bilateral problem formulated A.1.2,  $r$  is replaced by  $r(1+r)^{T-1}$ .

As demonstrated in the basic model,  $\frac{\partial e^C}{\partial(r(1+r)^{T-1})} < 0$ .

Since  $\partial r(1+r)^{T-1} / \partial T > 0$ , then  $\partial e^C / \partial T < 0$ . Similarly,  $\partial P^C / \partial T < 0$  holds.

### A2. Customary Formation with Articulation

#### A2.1 Custom formation with articulation: bilateral case

This problem considers the customary law processes that rely on *ex ante* articulations. In period 0, the states choose a rule by means of articulation. In future periods, the states will benefit from the rule with probability  $\pi$  and will be burdened with probability  $1 - \pi$ . Assuming a discount rate,  $r$ , the state maximizes the discounted present value of the total expected payoff:

$$\max_e \tilde{P} = \frac{1}{r} (\pi b e - (1 - \pi) a e^2)$$

The optimal level of effort  $e^A$  is:

$$e^A = \frac{\pi b}{2a(1 - \pi)}$$

And the maximal payoff is:

$$P^A \equiv \tilde{P}(e^A) = \frac{\pi^2 b^2}{4ar(1 - \pi)}$$

*A2.1.1. Participation constraint.* Similar to the traditional customary law case, the participation constraint  $P^A \geq k$  must hold in the articulation case. Comparative static results with respect to

the best payoff  $P^A$  are also similar:  $\partial P^A/\partial a < 0$ ,  $\partial P^A/\partial b > 0$ ,  $\partial P^A/\partial r < 0$ , and  $\partial P^A/\partial \pi > 0$ .<sup>26</sup>

*A2.1.2. Incentive problem.* From the optimal effort level under articulation  $e^A$ :  $\partial e^A/\partial a < 0$ ,  $\partial e^A/\partial b > 0$ ,  $\partial e^A/\partial r = 0$ ,  $\partial e^A/\partial \pi > 0$ .

*A2.1.3. Private versus socially optimal articulation.* Comparing the privately optimal effort and the socially optimal effort level:

$$\text{Privately optimal effort: } e^A = \frac{\pi b}{2a(1-\pi)}$$

$$\text{Socially optimal effort: } e^S = b/2a$$

This comparison shows that the two are equal only if the probability of being a beneficiary of the emerging rule is  $\pi = \frac{1}{2}$ . Also, note that as  $\pi \rightarrow 1$ ,  $e^A \rightarrow \infty$ .

## *A2.2 Comparison of custom formation with and without articulation*

This problem compares the participation constraint under articulation theories and the participation constraint under customary law theory:

$$\text{Articulation theories: } P^A = \frac{\pi^2 b^2}{4ar(1-\pi)} \geq k$$

$$\text{Customary law theory: } P^C = \frac{\pi^2 b^2}{4ar(r+1-\pi)} \geq k$$

The denominator of  $P^A$  is smaller than the denominator of  $P^C$  since the former has one less term than the latter. Hence  $P^A$  is larger than  $P^C$ . This means that the participation constraint is more easily satisfied in the articulation case than in the traditional customary law case.

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<sup>26</sup> See Fon and Parisi (2002) for the comparative static expressions.

This problem then compares the privately optimal effort that states would advocate under articulation theories with the privately optimal level of effort chosen under customary law theory:

$$\text{Articulation theories: } e^A = \frac{\pi b}{2a(1 - \pi)}$$

$$\text{Customary law theory: } e^C = \frac{\pi b}{2a(r + 1 - \pi)}$$

The denominator of  $e^A$  is smaller than the denominator of  $e^C$  since  $r > 0$ . Hence  $e^A > e^C$  holds.

### *A2.3 Custom formation with articulation: multilateral case*

The basic articulation model extends to the case in which randomly drawn states, from a larger population with  $N$  states, participate in customary practice. At each period, the probability of being an active participant depends on the number of states involved,  $1/N$ . This is the probability that a state either will benefit from the customary rule or it will become burdened by the rule. The following equation represents a state's private problem:

$$\max_e \tilde{P} = \frac{1}{r} \cdot \frac{1}{N} (\pi b e - (1 - \pi) a e^2)$$

Since  $N$  plays a similar role to  $r$  in the state's optimization problem, the comparative static results are qualitatively similar to  $\partial e^A / \partial r$  and  $\partial P^A / \partial r$  from before. In other words,  $\partial e^A / \partial N = 0$  and  $\partial P^A / \partial N < 0$ .

*A2.3.1. Uncertainty and articulation in custom formation.* This problem considers the case in which there is uncertainty whether a binding rule of custom will evolve from the participant states' initial efforts. In particular, it assumes that other states will follow the practice with a probability  $\beta$  ( $0 < \beta < 1$ ) in the future. The state's problem thus becomes:

$$\max_e \tilde{P} = \frac{1}{r} (\beta \pi b e - (1 - \pi) a e^2)$$

Since the probability  $\beta$  plays a role similar to that of  $b$  in the private optimization problem, in that it amounts to a multiplier of the future benefits, the comparative static result for  $\beta$  is also qualitatively similar to the comparative static result for  $b$ :  $\partial e^A / \partial \beta > 0$  and  $\partial P^A / \partial \beta > 0$ .

*A2.3.2. Time lags and custom formation through articulation.*

Here,  $T$  represents the number of periods after the prior articulation consolidates into a binding custom and reciprocal benefits are expected. In this case, the private optimization problem becomes:

$$\max_e \frac{(\pi b e - (1 - \pi) a e^2)}{r(1+r)^{T-1}}$$

In comparing this problem with the basic articulation case without time lags formulated in A2.1, it is clear that  $r(1+r)^{T-1}$  can replace  $r$ . By adopting results from the basic model, the following hold:

$$\frac{\partial e^A}{\partial (r(1+r)^{T-1})} = 0 \quad \text{and} \quad \frac{\partial P^A}{\partial (r(1+r)^{T-1})} < 0$$

Thus,  $\partial r(1+r)^{T-1} / \partial T > 0$  when the chain rule,  $\partial e^A / \partial T = 0$  and  $\partial P^A / \partial T < 0$ , is used. Notably there is a difference between the comparative static result  $\partial e^A / \partial T = 0$  and that obtained for the case of traditional customary processes where  $\partial e^C / \partial T < 0$ .

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