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EVER-ASCENDING EQUILIBRIUM THEORY: BEYOND CONFLICT AND COEXISTENCE TOWARDS THE CONTINUOUS ADVANCEMENT OF COOPERATIVE CIVILISATIONS

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ABSTRACT

International relations scholarship has extensively examined the conditions under which conflict emerges, peace is maintained, and cooperation becomes strategically sustainable. However, comparatively less attention has been directed towards the deliberate and recurring advancement of relationships beyond their existing stable configurations. This paper introduces Ever-Ascending Equilibrium Theory (EAET), a proposed interdisciplinary framework for understanding how strategically interdependent actors may identify, construct, and sustain transitions towards increasingly beneficial equilibria. Drawing upon noncooperative game theory, evolutionary cooperation, peace research, institutional economics, and security-community theory, EAET distinguishes strategic stability from collective desirability and proposes that the achievement of an equilibrium need not represent the highest attainable level of mutual benefit. The framework introduces an illustrative geopolitical equilibrium ladder encompassing entrenched conflict, deterrence, peaceful coexistence, active cooperation, collaborative integration, and continuous constructive advancement. It examines mechanisms through which actors may overcome strategic entrapment, including credible commitments, reciprocity, institutional reform, transparency, trust-building, and the restructuring of incentives. Historical illustrations involving European integration, Franco-German reconciliation, and United States–Soviet arms control demonstrate the relevance of these mechanisms without establishing independent empirical validation of the theory. The paper further considers the framework's potential applicability to organisational, commercial, community, and interpersonal relationships. Recognising constraints arising from asymmetric power, competing values, uncertainty, and institutional

fragility, it outlines a research programme incorporating agent-based simulations, repeated-game experiments, and artificial intelligence-assisted scenario modelling. EAET does not presume inevitable progress, universally comparable equilibria, or the existence of attainable improvements in every strategic environment. Rather, its proposed contribution lies in conceptualising equilibrium advancement as a deliberate, potentially recurring process. The paper concludes that strategic and institutional development should encompass not only the achievement and preservation of beneficial equilibria, but also the continuing capacity to discover, evaluate, and sustain more advantageous alternatives.

KEYWORDS: Ever-Ascending Equilibrium Theory; Nash equilibrium; international relations; geopolitical cooperation; peace and conflict studies; evolutionary game theory; equilibrium advancement; institutional evolution; security communities; strategic cooperation.

1. INTRODUCTION: The Limitations of Peace as an End Goal

The pursuit of peace has long occupied a central position in international relations, political philosophy, and the study of conflict. From the prevention of interstate warfare to the establishment of diplomatic institutions and mechanisms for collective security, considerable intellectual and political effort has been directed towards limiting violence and maintaining international stability. Yet the achievement of peace, conventionally understood as the absence of active hostilities, raises a fundamental question: does the cessation of conflict represent the most beneficial relationship attainable between states, or merely one of several possible strategic arrangements? Galtung (1969) distinguished between negative peace, characterised by the absence of direct violence, and positive peace, involving the absence of structural violence and the presence of more just social conditions. This distinction demonstrates that the elimination of overt conflict does not necessarily resolve the underlying conditions that constrain human welfare, cooperation, or collective development.

Game theory provides a complementary foundation for examining this problem. Nash (1950) established the concept of strategic equilibrium, whereby participants adopt strategies from which no individual actor can improve their outcome through unilateral deviation, given the strategies of others. Importantly, equilibrium does not imply collective optimality. A strategically stable arrangement may produce outcomes that are considerably less beneficial than alternative arrangements requiring coordinated behavioural change. Within international relations, this distinction is particularly consequential. Rival states may sustain prolonged

confrontation, mutual deterrence, or peaceful non-aggression because unilateral departures from established strategies carry unacceptable risks, even when alternative forms of interaction could generate greater mutual benefits. Consequently, stability should not be confused with optimality, nor should the absence of warfare necessarily be interpreted as evidence that a relationship has achieved its highest attainable level of development.

The security dilemma illustrates how strategically rational behaviour can perpetuate collectively undesirable conditions. Jervis (1978) demonstrated that measures undertaken by one state to strengthen its security may undermine the perceived security of others, encouraging reciprocal military preparations and reinforcing mutual suspicion. Such interactions can generate persistent competition despite the absence of an inherent preference for conflict. Similarly, Fearon (1995) demonstrated how informational asymmetries, incentives to misrepresent capabilities or intentions, and problems of credible commitment can obstruct negotiated settlements that states might otherwise prefer to costly warfare. These findings indicate that destructive or inefficient strategic relationships need not arise exclusively from irreconcilable objectives. Rather, they may emerge from incentive structures, uncertainty, institutional limitations, and the inability of actors to coordinate transitions towards more beneficial arrangements.

Nevertheless, the international system also demonstrates that competition and antagonism are not the only sustainable forms of interstate interaction. Keohane (1984) established how international institutions can facilitate cooperation among self-interested states by supporting information exchange, reducing uncertainty, and enabling the coordination of expectations. Axelrod and Keohane (1985) further demonstrated that cooperation under international anarchy depends upon strategic factors including mutual interests, anticipated future interactions, reciprocity, and institutional arrangements. Their analysis highlights the capacity of political actors not merely to respond to existing strategic conditions but to modify those conditions through institutional development, altered expectations, and negotiated commitments. Accordingly, international relationships need not remain confined to the strategic configurations within which they initially emerge.

However, an important conceptual distinction remains between the establishment of cooperation and the deliberate pursuit of progressively more beneficial strategic relationships. The cessation of armed conflict may permit non-aggression; non-aggression may create opportunities for diplomatic engagement; diplomatic engagement may facilitate reciprocal cooperation; and sustained cooperation may support increasingly integrated forms of

economic, scientific, institutional, and humanitarian collaboration. Each arrangement may exhibit a degree of strategic stability while generating substantially different opportunities and consequences for participating actors. These relationships should not be understood as an inevitable linear progression, nor should greater integration automatically be equated with superior outcomes. Rather, they illustrate the possibility that an existing equilibrium, however stable or comparatively peaceful, may remain inferior to alternative arrangements that could become attainable through appropriate changes in incentives, institutions, capabilities, and expectations.

This paper introduces Ever-Ascending Equilibrium Theory (EAET) as a proposed conceptual framework for understanding and facilitating transitions between strategically sustainable arrangements of increasing mutual benefit. The theory advances the proposition that existing equilibria should not necessarily be regarded as final strategic destinations, but as potentially revisable configurations from which more beneficial relationships may be developed. Its central emphasis is not simply upon cooperation as an alternative to conflict, but upon the continuing identification, evaluation, and construction of improved strategic arrangements. Within this framework, an ascending transition requires consideration of both the benefits associated with an alternative equilibrium and the conditions necessary to make that equilibrium attainable and sustainable. Advancement is therefore conceived as conditional rather than inevitable, and as potentially reversible rather than permanently secured.

The primary research question guiding this paper is: Under what conditions can actors occupying an established strategic equilibrium deliberately transition towards a more mutually beneficial and sustainable equilibrium, and how might such transitions enable further advancement? To address this question, the paper seeks to establish the theoretical foundations of equilibrium advancement, distinguish strategic stability from collective benefit, identify mechanisms capable of facilitating transitions between equilibria, and develop propositions suitable for subsequent empirical and computational investigation. Although its principal application concerns geopolitical relationships and international institutions, the proposed framework may also inform the analysis of organisational, commercial, community, and interpersonal relationships characterised by strategic interdependence.

The intended contribution is therefore not the discovery that cooperation can outperform conflict, a proposition extensively addressed within established scholarship, but the development of a general framework for examining equilibrium advancement as a potentially

continuous and deliberately facilitated process. By shifting analytical attention from the maintenance of existing stability towards the identification of attainable, more beneficial, and strategically sustainable alternatives, Ever-Ascending Equilibrium Theory seeks to contribute to a broader understanding of how international relations and other interdependent human systems might progress beyond the mere prevention of conflict towards the systematic expansion of cooperative possibilities.

2. Theoretical Foundations and Existing Literature

The theoretical foundations of Ever-Ascending Equilibrium Theory (EAET) emerge from several intersecting disciplines, particularly noncooperative game theory, evolutionary cooperation, peace and conflict studies, institutional economics, and international relations. Collectively, these disciplines demonstrate that strategically stable relationships can produce substantially different outcomes, that cooperation may emerge among self-interested actors, and that institutions and shared expectations can transform established patterns of interaction. However, these contributions do not constitute a unified theory of deliberately pursuing successive improvements in strategically sustainable relationships. The following review examines their relevance to the proposed framework while identifying the theoretical distinctions requiring further development.

Nash's (1950) formalisation of strategic equilibrium provides the foundational analytical concept. A Nash equilibrium exists when no participant can improve their payoff by unilaterally changing strategy while other participants maintain theirs. Crucially, equilibrium does not necessarily imply collective efficiency or desirable outcomes. The distinction between equilibrium and Pareto efficiency is particularly important: an allocation is Pareto efficient when no feasible alternative can improve one participant's welfare without worsening another's. Consequently, an equilibrium may be strategically stable while remaining Pareto inefficient, permitting the possibility of mutually advantageous alternatives. This distinction establishes the conceptual basis for considering movement between equilibria rather than regarding stability itself as the ultimate objective. Nevertheless, a Pareto-superior outcome is not necessarily an equilibrium, and its attainment may require changes in institutional conditions, incentives, or expectations.

Repeated-game theory demonstrates how the strategic possibilities available to interacting actors can change when relationships extend over time. Fudenberg and Maskin (1986) established important conditions under which a broad range of individually rational outcomes can be sustained as equilibria in repeated games when participants sufficiently value future

interactions. This result is significant because behaviour that appears individually disadvantageous within an isolated encounter may become strategically sustainable when future benefits and credible consequences influence present decisions. However, the multiplicity of potential equilibria creates an additional challenge: identifying which sustainable arrangement should be pursued and how participants might coordinate their transition towards it. The existence of more beneficial equilibria does not independently establish their accessibility.

Axelrod's (1984) investigation of repeated Prisoner's Dilemma interactions further demonstrated how cooperation can emerge without centralised enforcement or universal altruism. His computational tournaments highlighted the effectiveness of conditional reciprocity, particularly the strategy known as tit-for-tat, which initially cooperates and subsequently responds to an opponent's preceding behaviour. Axelrod and Hamilton (1981) also examined how reciprocal cooperation can emerge and persist under evolutionary conditions. These findings are relevant because they demonstrate mechanisms through which self-interested actors can develop sustained cooperation despite incentives for unilateral exploitation. Nevertheless, the effectiveness of reciprocal strategies depends upon the strategic environment, including the likelihood of repeated interaction, information reliability, and opportunities for retaliation or forgiveness. Cooperation should therefore be understood as conditional rather than inevitable.

Within international relations, the security dilemma illustrates how strategically rational decisions can perpetuate collectively disadvantageous relationships. Jervis (1978) demonstrated that states seeking to strengthen their own security may inadvertently threaten others, generating cycles of military competition and mutual suspicion. His analysis identified the relative effectiveness of offensive and defensive capabilities, together with their distinguishability, as important determinants of whether cooperation becomes feasible. Accordingly, prolonged rivalry may reflect a self-reinforcing strategic environment rather than an unavoidable incompatibility of national interests. For EAET, this suggests that equilibrium advancement may require altering the structural conditions that sustain confrontation, rather than merely encouraging more conciliatory behaviour.

Peace research provides an additional normative foundation. Galtung's (1969) distinction between negative and positive peace challenged the assumption that the absence of direct violence constitutes a sufficient condition for peaceful societies. Whereas negative peace concerns the absence of direct violence, positive peace addresses the structural conditions

associated with injustice and unequal life opportunities. This distinction establishes that relations without active hostilities may nevertheless remain socially and politically deficient. However, EAET proposes a further analytical question: even where peaceful relations and broadly beneficial institutions have been achieved, might additional mutually advantageous and sustainable arrangements remain attainable? The theory therefore treats peace not as an insignificant achievement, but as a potentially intermediate condition within a broader landscape of strategic possibilities.

Institutional scholarship demonstrates how cooperative arrangements can become durable through changes in governance and collective expectations. Keohane (1984) argued that international regimes can facilitate cooperation among self-interested states by providing information, reducing uncertainty, and supporting reciprocal arrangements. Similarly, Ostrom (1990) demonstrated that communities can develop institutional mechanisms for managing shared resources without necessarily depending upon either centralised coercion or unrestricted individual competition. Her work highlighted the importance of context-sensitive rules, monitoring, collective decision-making, and institutional adaptability. Together, these contributions indicate that strategic relationships are not determined exclusively by fixed preferences or material capabilities. Institutional arrangements can modify incentives, facilitate coordination, and sustain outcomes that might otherwise prove unattainable.

Perhaps the closest theoretical precedent for EAET arises from scholarship concerning security communities. Deutsch et al. (1957) introduced the concept of political communities characterised by dependable expectations that disputes would be resolved through peaceful change rather than warfare. Building upon this foundation, Adler and Barnett (1998) conceptualised security communities as socially constructed arrangements emerging through evolving interactions, institutions, shared identities, and mutual trust. Their framework identified three developmental phases: nascent, ascendant, and mature security communities. These phases describe increasingly developed patterns of coordination, mutual identification, and dependable expectations of peaceful conflict resolution. Importantly, Adler and Barnett also presented a multidimensional explanatory framework involving precipitating conditions, structural influences, social processes, and the formation of trust and collective identity.

The relevance of this scholarship to EAET is substantial. Adler and Barnett's (1998) framework already demonstrates that interstate relationships can evolve beyond conventional security competition towards increasingly institutionalised forms of peaceful interaction. Consequently, claims that EAET uniquely identifies progressive cooperation or the

transformation of geopolitical relationships would be difficult to sustain. The proposed distinction instead concerns the object and potential continuity of advancement. Security-community theory primarily investigates the emergence and consolidation of dependable peaceful relations, whereas EAET proposes that any strategically sustainable arrangement, including a mature security community, may be assessed for further attainable improvements. Its analytical focus is therefore directed towards identifying, evaluating, and potentially engineering successive transitions among equilibria, rather than treating a particular institutional or relational configuration as the ultimate developmental destination.

EAET consequently seeks to integrate three propositions derived from established scholarship: strategic stability does not guarantee collective optimality; institutional and behavioural mechanisms can alter the feasibility of cooperative arrangements; and established relationships may evolve into qualitatively different forms. Its proposed contribution is to organise these insights into a general framework of deliberate and potentially recurring equilibrium advancement. Such advancement must remain conditional upon feasibility, distributional consequences, strategic sustainability, and demonstrable improvements in the outcomes being evaluated. The framework does not presume that every equilibrium possesses a superior successor or that improvements can be arranged along a universally agreed hierarchy. Rather, it proposes a research programme for examining when superior stable arrangements exist, how actors might identify them, which mechanisms could facilitate their attainment, and whether successful transitions expand the possibilities for subsequent improvement. This distinction provides the theoretical foundation for the formal development of Ever-Ascending Equilibrium Theory in the following section.

3. Defining Ever-Ascending Equilibrium Theory

Ever-Ascending Equilibrium Theory (EAET) is proposed as a general framework for understanding how strategically interdependent actors may deliberately identify, pursue, and sustain transitions towards progressively more beneficial equilibria. The theory begins from the observation that a stable strategic relationship need not represent the most desirable arrangement available to its participants or to the wider societies affected by their decisions. Building upon Nash's (1950) formulation of strategic equilibrium, EAET distinguishes the conditions that sustain an existing arrangement from those determining its collective desirability. Its central proposition is that any identified equilibrium may possess a more beneficial and attainable successor, although neither the existence nor the accessibility of such an alternative can be presumed. Equilibrium advancement is therefore conceptualised as

a conditional, potentially recurring process rather than an inevitable or universally ordered progression.

For the purposes of EAET, a strategic equilibrium refers to a configuration of interdependent behaviours and expectations in which participating actors lack sufficient incentives to depart unilaterally from their established strategies, given the prevailing rules and anticipated responses of others. This definition is grounded in the Nash equilibrium concept but requires contextual qualification when applied to international relations. Geopolitical arrangements often involve repeated interactions, changing institutions, uncertainty, and evolving preferences. Consequently, an observed pattern of stability should not automatically be classified as a formally established Nash equilibrium. Rather, the existence and nature of an equilibrium must be demonstrated within an appropriately specified strategic model. Harsanyi and Selten (1988) further established that games may possess multiple equilibria, requiring additional principles to explain their selection. EAET adopts this concern with alternative stable outcomes while extending attention towards the mechanisms through which actors might intentionally transform the strategic environments in which those outcomes arise.

The distinction between equilibrium stability and societal desirability is foundational. Stability concerns whether an arrangement can persist under prevailing strategic incentives, whereas desirability concerns its consequences for participating actors and affected populations. A relationship characterised by military deterrence, mutual suspicion, and substantial expenditure on defensive capabilities may remain strategically stable while imposing significant economic, political, and humanitarian costs. Conversely, an alternative relationship involving credible security guarantees, economic cooperation, and institutionalised dispute resolution may offer greater benefits. However, identifying an apparently preferable outcome does not establish that it is strategically sustainable or practically attainable. Repeated-game research demonstrates that a range of outcomes can become sustainable under appropriate conditions, particularly when actors sufficiently value future interactions (Fudenberg & Maskin, 1986). EAET consequently treats desirability, attainability, and sustainability as analytically distinct requirements.

An ascending equilibrium transition is defined as a feasible movement from an established strategic equilibrium to another strategically sustainable arrangement that produces a demonstrable improvement under explicitly specified evaluative criteria. Such criteria may include human welfare, security, economic opportunity, institutional resilience, autonomy,

environmental sustainability, and the distribution of benefits and burdens. The theory gives particular analytical priority to Pareto improvements, whereby at least one affected actor benefits without another being made worse off. However, Pareto superiority alone cannot resolve every relevant question of justice, rights, or collective welfare. Sen (1970) demonstrated important tensions between Pareto-based collective decision principles and individual liberty. Accordingly, EAET does not assume that greater aggregate benefits necessarily establish an unambiguously superior equilibrium, particularly where improvements depend upon coercion, unequal burdens, or the violation of fundamental rights. This qualification becomes especially important when comparing geopolitical relationships. Different equilibria may generate competing advantages across security, prosperity, sovereignty, environmental protection, and political independence. One arrangement may maximise economic integration while increasing vulnerability to external coercion; another may preserve strategic autonomy while reducing opportunities for collective development. Where the relevant consequences cannot be ordered consistently without imposing contested normative assumptions, EAET recognises the equilibria as potentially incomparable rather than assigning them an artificial position within a universal hierarchy. The proposed concept of ascension therefore requires transparent evaluative criteria and sensitivity to affected populations, rather than reliance upon an unspecified measure of civilisational progress. Furthermore, improvements experienced by participating governments cannot automatically be equated with improvements experienced by the populations they represent.

EAET rests upon several foundational assumptions. First, strategically interdependent relationships may support multiple sustainable arrangements, although this is not guaranteed in every environment. Second, the strategic conditions governing relationships are not invariably fixed; institutions, information, capabilities, and expectations can change over time. North (1990) demonstrated the importance of institutions in shaping incentives and influencing long-term economic development, while Young (1998) examined how adaptive behaviour and social interaction contribute to the evolution of norms and institutional arrangements. Third, actors may possess sufficient agency to influence some of these conditions, although their capacity to do so may be constrained by asymmetric power, incomplete information, and structural dependencies. Fourth, improvements must be evaluated across their consequences and durability rather than inferred from increased cooperation alone. Finally, the possibility of further advancement remains an open analytical question even following the achievement of a comparatively beneficial equilibrium.

From these assumptions, EAET advances several foundational propositions. An existing equilibrium may be collectively suboptimal despite being individually rational for its participants. Alterations to incentive structures, institutions, information, or credible commitments may render alternative equilibria accessible. Successful transitions may subsequently change the strategic opportunity set, creating possibilities for additional improvements that were previously unavailable or unrecognised. Nevertheless, the existence of a desirable alternative does not guarantee successful coordination, and an achieved improvement may deteriorate through institutional failure, external shocks, changing preferences, or renewed strategic competition. These propositions are proposed as a basis for theoretical elaboration and empirical testing, rather than as independently demonstrated universal laws.

The potentially recurring character of advancement constitutes the organising principle of EAET. Earlier scholarship has examined equilibrium selection (Harsanyi & Selten, 1988), institutional evolution (North, 1990; Young, 1998), and the development of international security communities through shared expectations and trust (Adler & Barnett, 1998). EAET seeks to integrate these perspectives around an additional analytical objective: evaluating whether the achievement of one beneficial equilibrium creates opportunities to identify, construct, and sustain another. This does not imply infinite progress, a predetermined sequence of developmental stages, or the existence of a universally optimal endpoint. Rather, it proposes that no equilibrium should be presumed developmentally final solely because it is stable, peaceful, or currently regarded as satisfactory.

EAET thus conceptualises progress as an open-ended process of strategic discovery subject to feasibility, ethical evaluation, and institutional sustainability. Its central contribution is the proposed integration of equilibrium comparison, transition design, and recurring reassessment within a single conceptual framework. Whether this integration yields distinctive explanatory or predictive advantages over existing theories remains a question for further investigation. The subsequent sections therefore examine how the framework may be applied to geopolitical relationships and developed into a formal model capable of generating testable propositions concerning the conditions under which equilibrium advancement becomes possible.

4. The Geopolitical Equilibrium Ladder

The Geopolitical Equilibrium Ladder represents the central conceptual illustration of Ever-Ascending Equilibrium Theory (EAET), describing how relationships between states may

develop from persistent antagonism towards increasingly constructive and mutually beneficial forms of strategic interaction. The framework proposes six illustrative conditions: entrenched conflict, deterrence and hostile stability, peaceful coexistence, active cooperation, collaborative integration, and continuous constructive advancement. These conditions are not presented as an inevitable historical sequence or a universally applicable hierarchy. Rather, they identify qualitatively different strategic arrangements through which states may interact, each characterised by distinct incentives, expectations, institutional capabilities, and opportunities for collective benefit. Building upon the distinction between strategic stability and collective optimality established in game theory, the ladder illustrates how relationships may remain sustainable despite the existence of potentially superior alternatives (Jervis, 1978).

At the first illustrative level, entrenched conflict describes relationships characterised by recurring aggression, retaliation, and institutionalised hostility. Such arrangements may persist even when their consequences are destructive for all participants. Fearon (1995) demonstrated that informational asymmetries and credible-commitment problems can prevent rationally led states from achieving negotiated settlements they would otherwise prefer to costly warfare. Within EAET, entrenched conflict therefore represents a potentially self-reinforcing strategic condition rather than necessarily a formally demonstrated Nash equilibrium. Political leaders may anticipate that unilateral restraint will expose their populations to exploitation, while previous hostilities reinforce expectations of future aggression. Military mobilisation, nationalist narratives, domestic political incentives, and mutual distrust may consequently reproduce confrontational behaviour. A collectively undesirable relationship can thus persist because the perceived risks of unilateral departure exceed the anticipated benefits of peaceful engagement.

The second level, deterrence and hostile stability, arises when adversaries restrain direct aggression primarily because the anticipated consequences make escalation unattractive. Relative military capabilities, defensive preparedness, and credible retaliatory threats can discourage open warfare without eliminating underlying antagonism. Jervis (1978) demonstrated how offensive and defensive capabilities influence the security dilemma, including circumstances under which defensive measures intensify insecurity or facilitate cooperation. Deterrence may consequently sustain an absence of direct military conflict while requiring continued expenditure, strategic vigilance, and preparations for potential confrontation. Although such arrangements may represent substantial improvements over

active warfare, they remain vulnerable to misperception, technological change, and failures of credible signalling. Their stability depends principally upon calculated restraint rather than positive expectations concerning the intentions of other states.

The third level, peaceful coexistence, introduces a further distinction between the absence of hostility and the presence of constructive relationships. States may recognise one another's sovereignty, maintain diplomatic communication, and refrain from aggression while remaining politically distant or economically disengaged. This condition closely resembles elements of Galtung's (1969) concept of negative peace, in which the absence of direct violence does not necessarily establish positive social conditions. Within EAET, peaceful coexistence can be understood as strategic non-aggression without substantial mutual trust or collaborative value creation. Such relationships may be durable and desirable, particularly where deeper integration would threaten legitimate autonomy. Nevertheless, peaceful silence is analytically distinct from trust: states may refrain from conflict because interaction is unnecessary, because confrontation is costly, or because agreements constrain behaviour, without developing confidence in one another's future intentions.

The fourth level, active cooperation, emerges when states move beyond the avoidance of harm towards intentional coordination that generates identifiable mutual benefits. Cooperation may include negotiated trade arrangements, scientific exchanges, environmental initiatives, humanitarian programmes, and coordinated responses to shared security challenges. Axelrod and Keohane (1985) demonstrated that cooperation among self-interested states is shaped by mutual interests, expectations of future interaction, reciprocity, and institutional context. Importantly, cooperation does not require the elimination of conflicting interests or complete interpersonal or interstate trust. Actors may cooperate selectively because institutional safeguards, reputational consequences, and reciprocal incentives make collaboration strategically advantageous. Thus, active cooperation represents a behavioural development beyond peaceful coexistence: rather than merely refraining from actions that damage one another, states deliberately undertake activities intended to generate additional collective benefits.

The fifth level, collaborative integration, describes relationships in which cooperation becomes increasingly institutionalised, multidimensional, and embedded within shared systems of governance or collective action. Deutsch et al. (1957) conceptualised security communities around dependable expectations of peaceful change, while Adler and Barnett (1998) examined how transactions, institutions, social learning, trust, and collective identity

contribute to their development. European integration provides an important historical illustration of institutional transformation extending beyond bilateral non-aggression. Haas (1958) analysed how cooperation within the European Coal and Steel Community contributed to broader processes of political integration and changing expectations among participating actors. Within EAET, integration is distinguished from individual cooperative initiatives by the creation of enduring capacities for coordinating decisions, managing disputes, and undertaking sustained collective projects. However, deeper integration must not automatically be equated with improvement, since institutional arrangements may also reproduce inequalities, constrain autonomy, or impose costs upon excluded populations.

The sixth level, continuous constructive advancement, constitutes the distinctive aspirational dimension of EAET. At this stage, states or institutional communities do not regard an achieved cooperative arrangement as necessarily representing the highest attainable outcome. Instead, they develop recurring processes for identifying shared challenges, evaluating alternative arrangements, experimenting with institutional improvements, and sustaining beneficial adaptations. This concept extends the developmental perspective of security-community scholarship by proposing that even mature, peaceful, and deeply integrated relationships may contain opportunities for further improvement (Adler & Barnett, 1998). Such advancement might involve new scientific partnerships, strengthened collective resilience, improved environmental governance, or more equitable arrangements for sharing technological and economic benefits. Its defining characteristic is not the expansion of integration itself, but an institutionalised capacity to discover and evaluate additional beneficial strategic possibilities.

Transitions between these conditions depend upon mechanisms capable of changing the incentives and expectations that reproduce existing behaviour. Countries may remain trapped in destructive relationships because alternatives appear vulnerable to exploitation, domestic political structures reward antagonism, or credible commitments cannot be established. Conversely, transparent communication, verifiable agreements, reciprocal concessions, institutional monitoring, and repeated successful cooperation may progressively alter the strategic environment. Axelrod and Keohane (1985) emphasised the importance of institutional context and anticipated future interaction, while Fearon (1995) demonstrated why unresolved commitment and information problems can obstruct otherwise mutually preferable settlements. Within EAET, higher equilibria become attractive when their anticipated benefits outweigh transition risks and become sustainable when institutional and

strategic arrangements reduce incentives to return to destructive behaviour.

Nevertheless, the ladder must not be interpreted as a deterministic progression. States may occupy different conditions across different policy domains, regress following political or technological shocks, or maintain mutually beneficial relationships without extensive integration. Moreover, a transition benefiting participating governments may simultaneously disadvantage citizens, neighbouring states, or future generations. EAET therefore requires that proposed advancement be assessed through transparent welfare, security, autonomy, and sustainability criteria rather than assumed from greater institutional complexity. The ladder's central proposition is consequently both conditional and open-ended: geopolitical stability may exist at markedly different levels of collective benefit, and the achievement of one sustainable arrangement does not establish that further improvement is either impossible or guaranteed. By making the identification and deliberate construction of beneficial successor equilibria an explicit analytical objective, EAET reframes peaceful coexistence not as an inevitable endpoint, but as one possible foundation for continued strategic and civilisational development.

5. A Formal Model of Equilibrium Advancement

Ever-Ascending Equilibrium Theory (EAET) proposes a dynamic framework for analysing transitions between strategically sustainable arrangements characterised by differing levels of collective benefit. The model draws upon noncooperative game theory, repeated interactions, equilibrium selection, institutional economics, and evolutionary dynamics. Its central analytical concern is not whether a stable relationship exists, but whether alternative arrangements could generate preferable outcomes and become sustainably established through deliberate changes in strategic conditions. Nash's (1950) equilibrium concept provides the foundational stability criterion, while Harsanyi and Selten's (1988) examination of equilibrium selection demonstrates the importance of distinguishing among alternative strategically sustainable outcomes. EAET extends this perspective by treating the identification and implementation of improved equilibria as a potentially recurring process involving strategic adaptation, institutional development, and collective evaluation.

The model considers a population of strategically interdependent actors, principally sovereign states, although the underlying structure may accommodate organisations, communities, and individuals. Each actor possesses objectives, resources, capabilities, preferences, information, and a set of available strategies. In geopolitical applications, strategies may include military confrontation, deterrence, diplomatic restraint, negotiated cooperation, institutional

participation, and collaborative investment. Strategic outcomes depend not only upon individual decisions but also upon the simultaneous or anticipated decisions of other actors. Payoffs encompass the expected consequences of these interactions, including security, economic prosperity, political autonomy, technological capabilities, institutional resilience, and exposure to conflict. Consistent with Jervis (1978), the model recognises that efforts to maximise individual security can produce adverse collective consequences when defensive actions generate uncertainty or perceived threats among other states.

An equilibrium exists within the model when the specified strategic conditions and expectations make unilateral deviation insufficiently advantageous for participating actors. However, the stability criterion must correspond to the underlying interaction. Static Nash equilibrium may be appropriate for simplified strategic comparisons, whereas repeated or sequential interactions may require subgame-perfect or sequential equilibrium concepts. Fudenberg and Maskin (1986) demonstrated that repeated interactions can sustain a broad range of individually rational outcomes under particular assumptions concerning patience and strategic structure. Consequently, EAET does not presume that all observed geopolitical arrangements constitute formal equilibria. Rather, proposed equilibria must be assessed against the incentive and informational conditions governing the relevant model. Moreover, multiple equilibria may coexist as alternative solutions within the same strategic environment, even though the actors cannot necessarily occupy every alternative simultaneously.

The evaluation of equilibrium desirability constitutes a separate analytical operation. EAET distinguishes actor-specific payoffs from wider social consequences, recognising that benefits accruing to governments may differ substantially from those experienced by citizens or external populations. Potential welfare criteria include reductions in violence, improvements in material prosperity, institutional accountability, protection of individual freedoms, environmental sustainability, and equitable access to economic opportunities. Where an alternative equilibrium benefits at least one affected party without disadvantaging others, a Pareto improvement provides a comparatively unambiguous basis for identifying advancement. Nevertheless, Sen (1970) demonstrated that Pareto-based collective choice principles can conflict with individual liberty. Accordingly, the framework does not equate aggregate welfare maximisation with universally desirable progress. Equilibrium comparisons must explicitly identify whose interests are considered, how competing outcomes are weighted, and whether proposed improvements respect independently justified

ethical constraints.

A transition mechanism describes an intervention or process capable of altering the strategic conditions that sustain an existing equilibrium. Such mechanisms may involve negotiated commitments, verification arrangements, institutional reform, information exchange, reciprocal concessions, economic incentives, or changes in the anticipated consequences of defection. North (1990) established the importance of institutions in shaping incentives and long-term economic performance, while Myerson (1981), within the specialised context of auction design, demonstrated how designed strategic mechanisms can influence equilibrium outcomes under incomplete information. EAET generalises the analytical question to geopolitical relationships without assuming that international institutions can be designed or enforced with comparable precision. A proposed intervention constitutes a credible advancement mechanism only when it identifies how participating actors could adopt the new arrangement and why adherence would remain strategically advantageous after implementation.

From these definitions, the model advances a conditional proposition concerning equilibrium advancement. Where an alternative arrangement produces demonstrably preferable outcomes, where participating actors possess feasible means of coordinating the transition, and where the resulting incentives support continued adherence, movement towards a higher-benefit equilibrium may be achievable. This proposition distinguishes potential collective gains from the practical conditions required to realise them. The presence of mutual advantages does not eliminate risks associated with uncertainty, bargaining, domestic political constraints, or unequal capabilities. As Fearon (1995) demonstrated in explaining bargaining failures preceding war, private information and credible-commitment problems may prevent actors from achieving settlements preferable to costly conflict. EAET therefore treats transition feasibility as an independent analytical requirement rather than an automatic consequence of collective desirability.

A second proposition concerns equilibrium entrapment. Strategically interdependent actors may remain within collectively disadvantageous relationships when unilateral departures expose them to exploitation, when credible commitments cannot be established, or when institutional arrangements reinforce existing incentives. Such entrapment need not imply irrationality among participating actors. Instead, collectively inferior outcomes may persist because the available transition pathways are themselves unstable, excessively costly, or insufficiently credible. Jervis's (1978) analysis of the security dilemma illustrates how

individually defensive behaviour may reproduce mutual insecurity. Within EAET, identifying a superior equilibrium is therefore insufficient; the analytical challenge is to identify mechanisms capable of overcoming barriers separating existing conditions from feasible alternatives.

A third proposition addresses regression and strategic instability. Equilibrium advancement does not imply irreversible progress. Changes in military capabilities, political preferences, leadership, economic conditions, or external threats may undermine previously sustainable arrangements. Evolutionary game theory provides relevant evidence that equilibrium selection can depend upon adaptation and perturbation. Kandori et al. (1993) demonstrated how learning and stochastic mutations influence the long-run selection of equilibria, including circumstances in which risk considerations affect the resulting outcome. Within EAET, an institutional arrangement that initially supports cooperation may subsequently become unstable if incentives change or expectations deteriorate. The model therefore distinguishes achieving an improved equilibrium from preserving its viability under changing conditions.

A fourth proposition concerns uncertainty and distributional consequences. Actors may hold divergent beliefs concerning the intentions, capabilities, and likely responses of others, while anticipated benefits may be distributed unevenly across participating states and affected populations. A transition producing substantial aggregate gains may nevertheless generate concentrated losses sufficient to provoke resistance. Equilibrium advancement therefore depends partly upon the perceived distribution of benefits, the credibility of compensatory arrangements, and the reliability of information. Where uncertainty prevents actors from confidently assessing alternative outcomes, seemingly beneficial transitions may remain inaccessible. Accordingly, the model treats risk, incomplete information, and contested welfare judgments as substantive constraints upon advancement rather than complications that can be disregarded.

The final proposition concerns recurring advancement. Successful institutional or strategic transitions may alter the opportunity set available to participating actors, enabling forms of cooperation previously considered infeasible. However, the existence of multiple equilibria does not establish that they can be ordered along a single welfare hierarchy or connected through feasible successive transitions. EAET therefore conceptualises advancement as movement through a potentially branching landscape of sustainable strategic arrangements rather than an inevitable linear ascent. Some equilibria may be incomparable, some

transitions may produce benefits only under contested evaluative criteria, and some strategic environments may offer no identifiable improvement. The theory's distinctive hypothesis is that actors can potentially institutionalise the recurring examination of such possibilities, thereby developing a sustained capacity for discovering and pursuing beneficial successor equilibria.

Collectively, these propositions establish EAET as a proposed framework connecting equilibrium stability, welfare assessment, strategic transitions, and institutional adaptation. Its explanatory value must ultimately depend upon whether these relationships can be specified with sufficient precision to generate predictions distinguishable from existing theories of cooperation, equilibrium selection, and institutional change. The resulting research programme therefore requires explicit models of strategic interaction, transparent welfare criteria, identifiable transition mechanisms, and empirical or computational tests capable of demonstrating both successful advancement and circumstances of entrapment or regression.

6. Mechanisms for Ascending Between Equilibria

The advancement of geopolitical relationships between strategically sustainable equilibria requires more than recognition of the potential benefits of cooperation. States may acknowledge the desirability of peaceful or collaborative arrangements while remaining constrained by mistrust, asymmetric capabilities, domestic political incentives, and uncertainty regarding the intentions of other actors. Ever-Ascending Equilibrium Theory (EAET) therefore places particular emphasis upon mechanisms capable of modifying the strategic conditions that reproduce existing relationships. These mechanisms may include credible commitments, reciprocal cooperation, forgiveness, transparency, shared incentives, institutional development, and trust-building. Drawing upon established research into international cooperation and conflict resolution, EAET proposes that successful equilibrium advancement depends upon converting potentially beneficial alternatives into arrangements that actors can credibly adopt and sustainably maintain (Axelrod & Keohane, 1985; Jervis, 1978).

Credible commitments constitute a foundational mechanism because states frequently face uncertainty regarding whether their counterparts will honour negotiated obligations. Fearon (1997) demonstrated how costly signalling can communicate foreign policy intentions by imposing consequences upon leaders who subsequently contradict their commitments. However, mechanisms designed to strengthen credibility can also increase escalation risks, particularly where political leaders become constrained by public commitments. EAET

therefore distinguishes commitments that facilitate cooperation from those that merely intensify strategic confrontation. Cooperative commitments may become more credible through verifiable obligations, reciprocal implementation, external guarantees, and institutional procedures that increase the costs of opportunistic defection. Research by Leeds (2003) nevertheless demonstrates that international commitments remain vulnerable to changes in power and domestic political circumstances, indicating that credibility must be continually maintained rather than presumed permanent.

Reciprocal cooperation provides an additional mechanism through which actors may gradually alter expectations and strategic incentives. Axelrod (1984) demonstrated how conditional reciprocity can sustain cooperation in repeated interactions, even among self-interested participants lacking centralised enforcement. Axelrod and Keohane (1985) subsequently emphasised the importance of anticipated future interactions, mutual interests, and institutional context in determining whether cooperation becomes feasible under international anarchy. Within EAET, reciprocal initiatives may permit states to demonstrate reliability through limited, observable commitments before undertaking more consequential forms of collaboration. Such arrangements reduce the risks associated with immediate, comprehensive strategic transformation. Nevertheless, reciprocity must be distinguished from unconditional concession: successful advancement requires safeguards against exploitation and sufficiently credible expectations that cooperative behaviour will be reciprocated.

Forgiveness and the management of previous violations represent complementary mechanisms. Repeated interactions involving retaliation can become trapped in cycles where historical grievances and reciprocal punishment perpetuate collectively undesirable outcomes. Axelrod's (1984) analysis of cooperation highlighted the strategic importance of avoiding unnecessary conflict while remaining capable of responding to defection and restoring cooperation. Within EAET, forgiveness does not imply disregarding harmful conduct or abandoning accountability. Rather, it involves creating credible opportunities for actors to return to cooperative behaviour after violations, misunderstandings, or temporary strategic disruptions. Proportionate responses, graduated remedial measures, and negotiated restoration procedures may prevent isolated disputes from producing permanent regression. Such mechanisms are particularly relevant where the preservation of long-term relationships generates benefits exceeding those associated with indefinite retaliation.

Transparency and information exchange can further reduce the uncertainty that sustains hostile equilibria. Jervis (1978) demonstrated how difficulties distinguishing defensive from

offensive intentions can intensify the security dilemma. Measures such as military notifications, independent verification, agreed reporting procedures, and diplomatic communication may reduce misinterpretation and improve the predictability of strategic behaviour. However, transparency is not universally beneficial: disclosure may reveal vulnerabilities, produce information asymmetries, or facilitate exploitation where institutional safeguards are insufficient. EAET consequently treats transparency as a conditional mechanism whose effectiveness depends upon reciprocal obligations, verification quality, and the strategic environment. Its purpose is not necessarily unrestricted disclosure, but the provision of reliable information sufficient to improve coordination and reduce avoidable uncertainty.

Shared incentives and institutional arrangements are especially significant because they can change the underlying strategic consequences of cooperation and defection. Axelrod and Keohane (1985) argued that actors can influence their strategic environments through institutional development, issue linkage, and the modification of expectations. Empirical research by Fortna (2003) further demonstrated that stronger post-war agreements, including arrangements involving demilitarised zones, third-party guarantees, peacekeeping, and dispute-resolution mechanisms, were associated with more durable peace after controlling for important conflict-related factors. Such findings illustrate the distinction between diplomatic goodwill and structural transformation. Goodwill may temporarily improve perceptions without changing the incentives sustaining confrontation, whereas carefully designed institutions can create observable obligations, reduce uncertainty, and alter the anticipated consequences of noncompliance. EAET therefore regards institutional design as a potential means of transforming the strategic conditions under which relationships operate.

Trust-building represents a related but analytically distinct process. Kydd (2005) developed a game-theoretic account of international trust and mistrust, demonstrating their importance in shaping expectations of peaceful behaviour and cooperation. Trust cannot reliably be established through declarations of goodwill alone; it depends upon information, credible behaviour, and assessments of the incentives facing other actors. Adler and Barnett (1998) similarly examined how social learning, institutional interaction, and repeated transactions contribute to trust and collective identity within security communities. Within EAET, trust may reinforce equilibrium advancement by reducing perceived exploitation risks and enabling increasingly ambitious cooperation. However, trust should not be treated as a necessary precondition for every beneficial transition, since effective institutions may enable

cooperation even where substantial mistrust persists.

Building upon these mechanisms, EAET proposes a general process for evaluating potential equilibrium advancement. The process begins by identifying the prevailing strategic arrangement, including participating actors, available strategies, incentives, expectations, institutional constraints, and the distribution of benefits and costs. The existing relationship must then be assessed for strategic sustainability and potential collective inefficiencies. Where a more beneficial arrangement appears conceivable, analysts should identify the specific barriers preventing its attainment, distinguishing problems of information, commitment, coordination, incentives, and institutional capacity. Candidate interventions can subsequently be designed to address these barriers, with explicit attention to feasibility, ethical consequences, asymmetric vulnerabilities, and the interests of affected populations.

The proposed interventions should then undergo evaluation through formal strategic modelling, comparative historical analysis, controlled simulations, or carefully monitored real-world initiatives where ethically and practically appropriate. Their effectiveness should be assessed not merely by improvements in diplomatic sentiment, but by observable changes in behaviour, incentives, institutional reliability, collective outcomes, and resistance to renewed conflict. A candidate successor equilibrium should be regarded as credibly attainable only where actors possess feasible transition pathways and the resulting arrangement provides sufficiently durable incentives for continued adherence. Failure to satisfy these conditions may indicate that further institutional modification is necessary or that the proposed transition is presently infeasible.

Finally, successful advancement should initiate renewed evaluation rather than establish an assumed endpoint. EAET proposes that institutions may develop recurring capacities to identify emerging opportunities, reassess strategic constraints, and test additional mutually beneficial arrangements. However, this process remains conditional, and previously achieved improvements may regress when circumstances change. The theory's proposed contribution is therefore not the identification of an entirely new cooperation mechanism, but the integration of established mechanisms into a systematic, potentially recurring process of equilibrium assessment, transition design, implementation, and reassessment. Whether such a process generates improvements beyond those attainable through existing approaches constitutes a central question for subsequent empirical investigation.

7. Geopolitical Illustrations and Potential Applications

Historical developments in international relations provide useful illustrations of the strategic

transitions proposed by Ever-Ascending Equilibrium Theory (EAET). Relationships previously characterised by military confrontation have, under particular circumstances, developed into arrangements involving peaceful coexistence, institutional cooperation, and extensive integration. However, historical transitions cannot independently establish the validity of EAET, particularly where existing theories already provide substantial explanations for the observed outcomes. The following cases are therefore examined as illustrative applications rather than empirical confirmation. Particular attention is given to post-war European integration, Franco-German reconciliation, and United States–Soviet arms-control agreements, each of which demonstrates distinct mechanisms through which geopolitical relationships may become more cooperative while retaining important constraints and competing explanations.

Post-war European integration provides a prominent example of institutional transformation following sustained geopolitical conflict. The devastation of the Second World War created strong incentives among Western European governments to reconsider established approaches to economic competition and national security. On 9 May 1950, French Foreign Minister Robert Schuman proposed placing French and West German coal and steel production under a common authority, creating an institutional foundation for cooperation in industries closely associated with military capabilities. The resulting European Coal and Steel Community, established by treaty in 1951 and operational from 1952, brought together six founding states. Subsequent agreements, particularly the 1957 Treaties of Rome, extended cooperation into broader economic activities (European Union, n.d.). <Cite ref="turn328353search10"/> These developments illustrate how deliberate institutional arrangements can change the incentives and expectations governing relations among states.

Haas (1958) interpreted early European integration through the development of supranational institutions and the potential extension of cooperation from particular economic sectors into wider political relationships. From an EAET perspective, the European experience illustrates a sequence in which the cessation of warfare provided opportunities for institutional cooperation, which subsequently created possibilities for more extensive integration. Nevertheless, explaining this transformation exclusively through equilibrium advancement would neglect important historical influences. Trachtenberg (1999) demonstrated the significance of the post-war European security settlement, particularly the German question and the strategic relationships surrounding the emerging Cold War. American security commitments, Soviet geopolitical pressure, and domestic political reconstruction therefore

constitute substantial competing explanations. EAET may offer a complementary framework for interpreting the progression of strategic arrangements, but the historical evidence does not establish that an independent equilibrium-advancement mechanism caused European integration.

Franco-German reconciliation provides a more focused illustration of the distinction between non-aggression and constructive partnership. Following repeated military confrontations, including the Franco-Prussian War and two world wars, France and Germany developed institutional arrangements intended to reduce antagonism and establish durable cooperation. The Élysée Treaty, signed by Charles de Gaulle and Konrad Adenauer on 22 January 1963, established structured bilateral consultations concerning foreign policy, defence, education, and youth affairs (Federal Foreign Office, n.d.). <Cite ref="turn344859search9"/> Unlike a relationship sustained exclusively through deterrence or diplomatic restraint, this arrangement created recurring opportunities for coordination and social interaction. Its significance within EAET concerns the movement from avoiding renewed conflict towards the deliberate construction of mechanisms supporting shared benefits.

The subsequent development of Franco-German cooperation further illustrates the potentially recurring nature of strategic advancement. Institutional relationships expanded through educational exchanges, political coordination, cultural initiatives, and joint economic activities. The Treaty of Aachen, signed in 2019, sought to deepen bilateral cooperation and address emerging challenges within the European framework (Federal Foreign Office, n.d.). <Cite ref="turn344859search9"/> These developments are consistent with the EAET proposition that successful cooperation may create opportunities for additional institutional improvements. However, Adler and Barnett's (1998) security-community framework already explains important elements of this transformation through social learning, institutional interaction, trust, and collective identity. Consequently, Franco-German reconciliation should not be presented as uniquely validating EAET. Its value lies in illustrating the type of recurring strategic assessment and institutional adaptation that EAET proposes to examine systematically.

United States–Soviet arms control offers a contrasting case in which substantial cooperation emerged without eliminating geopolitical rivalry. During the Cold War, both superpowers maintained extensive military capabilities and mutually threatening nuclear arsenals. Nevertheless, the anticipated consequences of nuclear confrontation created incentives to negotiate arrangements limiting aspects of their strategic competition. The Strategic Arms

Limitation Talks, initiated in 1969, produced the 1972 Anti-Ballistic Missile Treaty and an interim agreement restricting specified strategic offensive weapons (U.S. Department of State, Office of the Historian, n.d.). <Cite ref="turn328353search8"/> These agreements illustrate how adversarial states may identify shared interests in reducing particular risks despite retaining conflicting political objectives and substantial mutual distrust.

Schelling (1961) argued that arms control could involve mutually advantageous accommodation between potential adversaries, particularly through measures intended to reduce the probability, severity, or costs of warfare. Within EAET, such arrangements illustrate the possibility of improving particular dimensions of an existing strategic relationship without achieving comprehensive reconciliation. Nevertheless, arms-control cooperation did not eliminate superpower competition, ideological antagonism, or military confrontation through indirect means. The broader history of détente also demonstrates that negotiated cooperation can coexist with persistent strategic rivalry and may subsequently deteriorate (Garthoff, 1994). Accordingly, the case highlights both the feasibility of limited upward transitions and the constraints imposed by continuing security competition.

Taken together, these cases suggest that geopolitical relationships may develop through qualitatively different strategic arrangements, but do not demonstrate that such developments follow a universal sequence. European integration illustrates extensive institutional transformation, Franco-German reconciliation highlights recurring cooperation and trust-building, and US–Soviet arms control demonstrates selective collaboration within an adversarial relationship. Established theories of security communities, institutional cooperation, neofunctional integration, and strategic bargaining already explain substantial aspects of these outcomes. The potential contribution of EAET therefore lies not in retrospectively relabelling historical developments, but in generating prospective, testable propositions concerning how actors might identify superior sustainable arrangements, overcome transition barriers, and evaluate possibilities for subsequent advancement. Historical illustrations establish the plausibility and relevance of these questions; demonstrating the independent explanatory value of EAET requires comparative research capable of distinguishing its predictions from those of existing theoretical frameworks.

8. Generalisability Beyond Geopolitics

Although Ever-Ascending Equilibrium Theory (EAET) is principally developed within the context of geopolitical relationships, its underlying strategic architecture may extend to other forms of human interaction characterised by interdependence, recurring decisions, competing

interests, and opportunities for mutual benefit. The central proposition that strategically sustainable arrangements need not represent the most beneficial attainable outcomes is not exclusive to sovereign states. Organisations, commercial enterprises, communities, families, and individuals may similarly maintain established behavioural patterns despite the existence of potentially preferable alternatives. Axelrod's (1984) research into repeated interactions demonstrates how reciprocity can sustain cooperation among self-interested actors across different strategic environments, while Deutsch (1973) examined the conditions under which conflict develops constructively or destructively across interpersonal and intergroup relationships. These contributions provide an established foundation for investigating whether the mechanisms proposed by EAET exhibit meaningful similarities across different scales of social organisation.

Within organisations, established equilibria may arise through recurring patterns of competition, departmental separation, resource allocation, and institutional expectations. Departments may protect information, duplicate activities, or resist cooperation because existing performance incentives reward local optimisation rather than collective effectiveness. Such behaviour may remain individually rational for participating units while generating avoidable organisational inefficiencies. Ring and Van de Ven (1994) developed a process framework describing how cooperative interorganisational relationships emerge and evolve through negotiation, commitment, execution, and the interaction of formal and informal mechanisms. From an EAET perspective, organisational advancement may involve modifying performance incentives, decision-making arrangements, and accountability structures so that collaboration becomes sustainable rather than dependent upon temporary managerial goodwill. Nevertheless, organisational authority creates distinctive opportunities for intervention unavailable within relationships among sovereign states.

Commercial partnerships similarly demonstrate how cooperation can generate benefits beyond those attainable through isolated competition. Dyer and Singh (1998) identified relationship-specific investments, knowledge-sharing routines, complementary resources, and effective governance as potential sources of interorganisational competitive advantage. These findings suggest that commercial relationships may progress from adversarial bargaining or transactional exchange towards coordinated innovation and enduring partnerships. However, greater collaboration does not necessarily improve every participant's circumstances. Unequal bargaining power, dependence upon dominant partners, and restrictive contractual arrangements may produce persistent inequalities even where aggregate commercial benefits

increase. Accordingly, EAET requires evaluation of the distribution and sustainability of gains rather than treating deeper partnership as inherently advantageous.

Community relationships provide another potential application, particularly where individuals must collectively manage shared resources or coordinate responses to common challenges. Ostrom (1990) demonstrated that communities can establish durable institutional arrangements for governing common-pool resources through locally developed rules, monitoring, and collective decision-making. These findings illustrate how participants may overcome coordination difficulties without relying exclusively upon external authority or unrestricted competition. Within EAET, community advancement could involve transitions from recurring disputes or ineffective collective action towards dependable cooperation, followed by further improvements in governance, resource management, and shared welfare. However, community institutions differ from geopolitical arrangements in their membership structures, enforcement capacities, cultural expectations, and frequently more immediate opportunities for social accountability.

At the interpersonal level, EAET can be illustrated through a hypothetical relationship between two individuals experiencing recurring disagreements. Initially, repeated criticism and defensive responses may create a self-reinforcing pattern in which both participants anticipate hostility. They may subsequently adopt avoidance, reducing overt confrontation without resolving their underlying disagreement. This resembles the distinction between active conflict and peaceful coexistence within the geopolitical framework. A further transition may occur when both individuals establish constructive communication, acknowledge competing interests, and develop reliable expectations concerning one another's behaviour. Continued cooperation may then produce mutually beneficial arrangements, such as shared responsibilities, coordinated problem-solving, and collaborative personal or professional goals. Deutsch (1973) identified the importance of cooperative and competitive processes in shaping conflict outcomes, while Gottman and Levenson (1992) documented associations between recurring interaction patterns, relationship satisfaction, and subsequent marital dissolution. The hypothetical progression illustrates possible transitions rather than an inevitable developmental sequence.

Families and close relationships nevertheless introduce considerations that cannot be adequately represented through simplified strategic payoffs. Emotional attachment, psychological safety, caregiving responsibilities, developmental differences, and unequal dependence may fundamentally influence what constitutes a desirable outcome. Emerson's

(1962) analysis of power-dependence relations demonstrates why relational power cannot be separated from patterns of dependence between participants. Consequently, maintaining a relationship should not automatically be treated as preferable to separation, particularly where coercion, exploitation, or abuse is present. Within EAET, an ascending transition must therefore be assessed in terms of individual welfare, autonomy, safety, and the distribution of consequences rather than the preservation or intensification of cooperation as an end in itself.

The generalisability of EAET ultimately depends upon distinguishing transferable strategic principles from context-specific assumptions. Across different scales, actors may experience interdependence, strategic uncertainty, repeated interaction, asymmetric incentives, and difficulties coordinating mutually beneficial change. However, sovereign states, commercial organisations, communities, and individuals differ substantially in their authority structures, enforcement mechanisms, information environments, preferences, and ethical obligations. The appropriate concept of equilibrium must therefore be specified independently within each application, and apparent similarities should not be mistaken for empirical equivalence. EAET consequently proposes a potentially transferable analytical framework rather than a universal developmental law. Its cross-scale contribution rests upon examining whether the deliberate identification, construction, and reassessment of beneficial sustainable arrangements can improve outcomes in diverse systems, while recognising that the mechanisms and criteria governing advancement may differ fundamentally across contexts.

9. Empirical Testing, Limitations and Future Research

The scientific value of Ever-Ascending Equilibrium Theory (EAET) depends upon its capacity to generate empirically distinguishable predictions concerning the emergence, transformation, and sustainability of strategic relationships. Although the preceding sections establish a conceptual framework for equilibrium advancement, neither the existence of superior alternatives nor the effectiveness of deliberate transition mechanisms can be assumed. Accordingly, EAET requires systematic investigation capable of identifying successful transitions, unsuccessful interventions, equilibrium entrapment, and strategic regression. Computational modelling, repeated-game experiments, comparative historical analysis, and artificial intelligence-assisted scenario exploration provide complementary approaches for evaluating the theory. These methods should establish whether the proposed framework offers explanatory or predictive advantages beyond established theories of cooperation, equilibrium selection, and institutional development.

Agent-based modelling provides a particularly appropriate methodology because it enables

researchers to examine how collective strategic arrangements emerge from interactions among heterogeneous actors. Epstein (2006) demonstrated the explanatory potential of computational societies in which relatively simple behavioural rules generate complex aggregate outcomes. Similarly, Axelrod (1997) applied agent-based approaches to cooperation, competition, and institutional adaptation. An EAET simulation could represent states as agents possessing varying military capabilities, economic resources, preferences, trust assessments, and strategic expectations. Agents would interact repeatedly under different institutional environments, including unrestricted competition, deterrence-based relationships, negotiated commitments, and cooperative governance arrangements. Researchers could subsequently examine whether interventions designed to alter strategic incentives facilitate transitions towards arrangements that are both more beneficial and more resistant to defection.

Experimental comparisons should distinguish the performance of EAET-inspired transition mechanisms from existing strategic approaches. Simulations could compare agents pursuing immediate individual advantage, conventional reciprocal cooperation, externally imposed institutional rules, and deliberately structured equilibrium advancement. Relevant outcomes would include conflict frequency, collective welfare, distributional inequality, institutional durability, transition costs, and the frequency of regression. Initial experiments should employ simple, analytically tractable games before extending the framework towards environments involving multiple actors and institutional complexity. Repeated-game theory provides an established foundation for such investigations, particularly through demonstrations that different equilibrium outcomes may become sustainable under specified conditions of patience and strategic interaction (Fudenberg & Maskin, 1986).

A critical requirement is to distinguish the theory's specific contribution from the effects of cooperation itself. An experimental arrangement generating higher welfare than unrestricted competition would not independently validate EAET, since the benefits of reciprocal cooperation are already established within game-theoretic research. Stronger evidence would require demonstrating that a recurring process of equilibrium assessment, targeted intervention, and reassessment achieves improvements beyond those produced by otherwise comparable cooperative strategies. Experimental designs should therefore include appropriate control conditions, independently defined welfare criteria, multiple randomised simulation runs, and sensitivity analyses across alternative assumptions. Wilensky and Rand (2015) emphasised the importance of verification, validation, and replication in agent-based

research. Such procedures would be essential to establish that apparent advancement reflects a robust strategic mechanism rather than artefacts of model construction.

Evolutionary dynamics introduce an additional opportunity for testing equilibrium persistence and regression. Kandori et al. (1993) demonstrated how learning and stochastic perturbations can influence long-run equilibrium selection, including circumstances in which risk-dominant outcomes prevail. EAET simulations could investigate whether initially beneficial cooperative arrangements remain stable following changes in military capabilities, economic conditions, political preferences, or external threats. Such experiments would help distinguish temporary improvements from strategically sustainable advancement. They could also reveal circumstances where attempts to establish more ambitious cooperation undermine previously stable arrangements, thereby producing outcomes inconsistent with the intended direction of transition.

Substantial theoretical limitations must nevertheless be acknowledged. Asymmetric power can permit dominant actors to impose arrangements that appear stable while producing unequal or coercive outcomes. Strategic exploitation may allow participants to appropriate cooperative benefits without honouring reciprocal obligations. Incomplete information and credible-commitment problems can prevent mutually preferable agreements from emerging, as demonstrated by Fearon (1995). Moreover, institutional arrangements may become fragile when enforcement capabilities weaken or participating actors revise their expectations. Consequently, observed stability cannot independently establish fairness, legitimacy, or durability. Any empirical assessment must distinguish collectively beneficial transitions from arrangements that merely consolidate the strategic advantages of powerful participants.

Conflicting values and distributional consequences present further methodological difficulties. States and populations may disagree about the relative importance of sovereignty, security, prosperity, autonomy, environmental protection, and individual rights. Sen (1970) demonstrated fundamental tensions between Pareto principles and particular conceptions of individual liberty, challenging the assumption that collective outcomes can always be ranked according to uncontested welfare criteria. EAET therefore cannot rely upon a universally valid measure of advancement. Researchers should assess alternative welfare specifications, identify affected populations, and report trade-offs transparently. Where competing equilibria cannot be ranked without imposing contested normative assumptions, the appropriate conclusion may be that their relative desirability remains indeterminate.

Artificial intelligence may offer supplementary capabilities for exploring complex strategic

environments and identifying potential transition pathways. Park et al. (2023) demonstrated how language-model-based generative agents can simulate aspects of social behaviour through memory, reflection, and planning. Such approaches could support exploratory assessments of diplomatic communication, institutional adaptation, and heterogeneous expectations within computational environments. Rahwan et al. (2019) further argued for the systematic scientific investigation of machine behaviour, including interactions between artificial agents and human institutions. Within EAET, AI-supported scenario modelling could assist researchers in generating candidate interventions, exploring alternative strategic responses, and identifying potentially overlooked opportunities for cooperation.

However, AI-generated behaviour must not be equated with reliable predictions of human or geopolitical decision-making. Language models may reproduce biases embedded in training data, generate inconsistent strategic preferences, or produce apparently plausible outcomes unsupported by historical evidence. Computational limitations further constrain the realistic representation of political institutions, cultural identities, strategic deception, and changing international conditions. AI systems also cannot independently resolve normative disagreements concerning the desirability of competing equilibria. Consequently, AI-supported findings should be treated as exploratory hypotheses requiring independent verification rather than authoritative demonstrations of feasible geopolitical outcomes.

Future research should therefore combine controlled computational experiments with comparative historical and prospective institutional analyses. A particularly important falsification criterion would arise if EAET-inspired transition processes consistently failed to outperform simpler cooperative strategies under comparable conditions, or if predicted advancements proved systematically unstable after realistic disturbances. Such findings would challenge claims concerning the framework's independent utility, even where its constituent game-theoretic principles remained valid. Ultimately, EAET should be evaluated not by the attractiveness of its underlying aspiration, but by whether it identifies attainable improvements, explains barriers to strategic change, and predicts the conditions under which beneficial equilibria can be constructed and sustained.

10. CONCLUSION: From Maintaining Peace to Advancing Civilisation

The pursuit of peace remains one of the defining objectives of international relations. Nevertheless, the absence of warfare, while essential to human security and societal development, does not necessarily represent the most beneficial strategic relationship attainable between states. Ever-Ascending Equilibrium Theory (EAET) advances the

proposition that established patterns of geopolitical interaction, including those characterised by peaceful coexistence and sustained cooperation, may contain unrealised opportunities for further collective advancement. Building upon Nash's (1950) distinction between strategic equilibrium and the outcomes associated with participating actors, and Galtung's (1969) differentiation between negative and positive peace, EAET proposes that stability should not automatically be equated with optimality, nor the achievement of peace with the exhaustion of possible progress.

The theory's principal conceptual contribution lies in integrating equilibrium comparison, strategic transition mechanisms, institutional adaptation, and recurring reassessment within a unified framework. Existing scholarship demonstrates how cooperation can emerge among self-interested actors through reciprocity, institutional arrangements, and changing expectations (Axelrod & Keohane, 1985). Research concerning security communities further establishes how geopolitical relationships may develop into arrangements characterised by trust, shared identities, and dependable expectations of peaceful change (Adler & Barnett, 1998). EAET seeks to extend these perspectives by proposing that the deliberate identification and construction of beneficial successor equilibria may itself become an enduring institutional capability. Its distinctive emphasis therefore concerns not merely achieving cooperation, but continually examining whether more beneficial and strategically sustainable relationships can be developed.

The framework carries potential implications beyond geopolitics. Organisations, commercial partnerships, communities, and interpersonal relationships may similarly become established within stable yet collectively disadvantageous patterns of interaction. Ostrom's (1990) research into institutional self-governance demonstrates how participants can develop arrangements that alter incentives and sustain collective action. EAET proposes that comparable processes of strategic evaluation, institutional adjustment, and renewed cooperation may be examined across different forms of human interdependence. Nevertheless, its application requires sensitivity to differences in power, institutional authority, individual autonomy, and the distribution of benefits.

The theory does not presume that progress is inevitable, that all equilibria can be universally ranked, or that every existing arrangement possesses an attainable superior successor. Conflicting values, incomplete information, coercion, institutional fragility, and strategic regression remain substantial constraints. Consequently, EAET should presently be understood as a proposed theoretical framework requiring further formalisation and empirical

evaluation, rather than an established predictive law.

Ultimately, the significance of EAET lies in reconsidering the objectives of strategic and institutional development. Preventing conflict, establishing peaceful relationships, and sustaining beneficial cooperation are indispensable achievements. Yet such achievements need not constitute the limits of collective possibility. The enduring challenge for international relations, and potentially for human cooperation more broadly, may therefore involve not only creating and preserving beneficial equilibria, but developing the institutional and strategic capacity to continually discover, evaluate, construct, and sustain better ones.

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This paper has been created with the help of Chat GPT and Claude. The core ideas are all of the authors, however AI has been used to expand on these ideas and assist with research and the overall creation of this paper, furthermore, in this paper the AI tools were used as research assistants to independently verify the ideas behind this paper. As part of the AI Disclosure the author wishes to state he is of the belief that AI is a tool to expand the overall knowledge base of the civilization and hopes this paper stands as part of the argument to allow for increased AI and Human collaboration in academia. The author bears all responsibility for the text and can confirm comprehensive collaborative engagement with AI's participation to ensure there is no hallucination.

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