

*Forum Series on the Role of Institutions in Promoting Economic
Growth*

**Comments on Douglass North's
"Understanding the Process of Economic Change"**

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Director of Research Coordination,
The IRIS Center at the University of Maryland**

Forum 7

Institutional Barriers to Economic Change: Cases Considered

24 June, 2003

Washington D.C.



MERCATUS CENTER
GEORGE MASON UNIVERSITY



Forum Series on the Role of Institutions in Promoting Economic Growth

Directed by the Mercatus Center at George Mason University and The IRIS Center

Sponsored by USAID's EGAT EG SEGIR/LIR PCE-I-00-97-00042-00, TO 07

About the Series

The objectives of the Forum Series are to help USAID make its donor assistance more effective and sustainable by incorporating insights from the New Institutional Economics into USAID's programming and delivery of development assistance. Services for Forums 6,7, and 8 are provided by the Mercatus Center at George Mason University and its consultants and the Center for Institutional Reform and the Informal Sector (IRIS). Editor for Forums 6, 7, and 8 is Peter Boettke, the project director for this portion of the Series with support from the overall project director, Clifford Zinnes, and the Forums Steering Committee (Ed Connerley, Jim Elliott, Jonathan Sleeper, and Mark Gellerson), chaired by the activity's COTR, Fred Witthans. Funding for the Series is provided by USAID's Bureau for Economic Growth, Agriculture, and Trade, Office of Economic Growth through SEGIR/LIR contract PCE-00-97-00042-00, Task Order 07. Copyright 2003 by the Mercatus Center.

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I. Introduction

We economists owe so much to Prof. North. He has helped us to recognize that, in our quest to bring scientific respectability to economic modeling, we have created an *ahistorical* theory of an intrinsically path-dependent process and in so doing we have thrown the baby out with the bathwater. This together with his other insights has helped to reintroduce the importance of transaction costs into the study of economics in general and development economics in particular. While this is surely enough for anyone's contribution to a field, Prof. North in the present paper endeavors to carry on his path-breaking work up the causal—or shall I say "cultural"—chain, as I shall now describe. The paper hopes that eventually such investigation might help us to understand "how we can adjust and make changes in policies so that they produce more effective performance characteristics on the part of societies and economies" (p. 17). Given the broad awareness and acceptance of Prof. North's earlier contributions, in this note I will focus in the main on what I understand is new to Prof. North's writing.

This note first summarizes my understanding of the new framework that forms the basis of Prof. North's paper. It then discusses the possible implications for USAID's technical assistance. The paper then endeavors to stimulate critical discussion and assessment of Prof. North's new ideas in two ways. First, it sets out a number of questions to be clarified. Next, it raises a series of concerns with the new framework. Most of these concerns simply arise from the fact that there is only just so much one can communicate about path-breaking ideas in a 21-page, double-spaced, non-technical presentation.

Prof. North is not just a leading economist but an evangelical one who holds convictions with a strength equal to the power of his ideas. It is therefore helpful to summarize what I understand to be his underlying “agenda” prior to entering into his new framework and its initial assessment. Though not new to his writings, they provide a context—may I say reveal the path-dependence—to his continued theorizing.

First, Prof. North admonishes us that we need to understand how economic systems *change* and not just their *levels*. His fear is that our theories tend to be “static”, whereas economic systems are “dynamic”. Second, Prof. North is set on getting economists to recognize both “the role of ideas” [and beliefs] and the inadequacy of the rationality assumption alone in understanding how economic agents make choices. In fact, he calls the latter assumption a “stumbling block to the path of future economic progress.” Third, economic theory should not take transaction costs as zero and, once included as a part of analysis, the existence and role of institutions to mitigate these can be rigorously addressed. Finally, as a result of, *inter alia*, the path dependence of economic systems, much that will transpire in the future will be entirely novel, that is, be subject to “pure uncertainty” (i.e., unknown probability distribution). Under such conditions, economic theory cannot—and, therefore, should not—make predictions. We will address these assumptions when we assess Prof. North’s new ideas, below.

II. Paper summary

In keeping with his modest nature, Prof. North stresses at the outset that his new views should not be construed as a theory but a “rethinking” of the process of economic change (and, especially in the present paper, the relationship of belief to institutions).

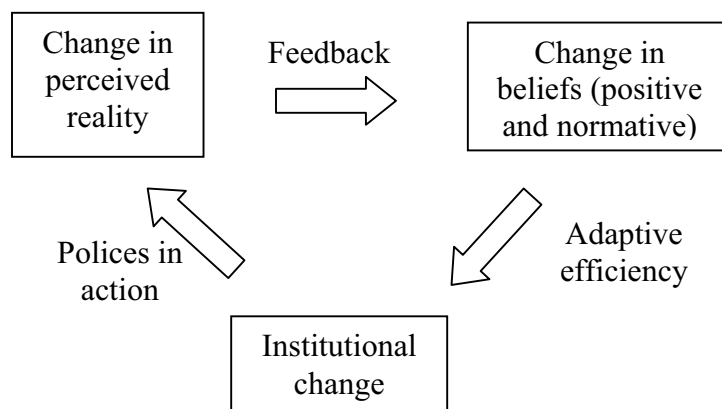
Assumptions. Related to his agenda just described, the paper builds upon a series of assumptions. First, the transaction costs associated with *personal* exchange rise quickly with scale. Second, the advent of institutions changed the payoff so that cooperation in *impersonal* exchange paid off, allowing the capture of economies of scale. Third, economic change is the result of a small number of key factors, including (i) the quantity and quality of human beings, (ii) the stock of human knowledge, and (iii) the “institutional matrix” (incentive structure of society). Fourth, a theory of economic change must take into account that the process of applying science to technology changes the human environment fundamentally. Fifth, the mind (brain?)

works on pattern-based reasoning. Finally, the future is novel and outside our range of inferential experience.

“*Model.*” Prof. North’s focus is on the efforts of humans to control their environment, with the desire to reduce its level of uncertainty as a key objective. He sees the construct of “institution” as their main tool. Due to the ethereal nature of institutions—and especially informal ones—Prof. North stresses the importance of beliefs. He posits that beliefs lead to a structure of institutions, that beliefs connect “reality” to institutions, and that when beliefs do not coincide with reality policies will not produce the intended results, an example being economists’ *belief* in rationality. This model can be summarized by the diagram in Figure 1.

Using this framework, Prof. North makes several arguments. First, that policy changes the world in novel ways (the future is *non-predictable*). Second, that path dependence constrains scope for change. Third, that formal rules evolve from the working out (adaptive aggregation) of beliefs and informal norms of behavior. Finally, that *political* institutions must exist to support the *economic* institutions of impersonal exchange.

Figure 1: Schema of the relationship between beliefs and institutions



Conclusions. Prof. North draws a number of consequences from his theorizing. First, he sees the informal norms geared to personal exchange which emerged during early periods of development as the main obstacle development. This is because modern economic development requires that economic agents engage in low transaction cost *impersonal* exchange and these necessitate the creation of new, flexible-but-formal institutions. The ability of a society’s institutions to constantly evolve into the appropriate forms and functions to serve the ever-changing

landscape of an economic system subject to constant technological change is what Prof. North refers to as its “adaptive efficiency”. He sees as an implication, for example, that one should not assume, just because particular finance and capital markets may have worked well in the past, that they should work well today. (This is, presumably, more a concern for the countries OECD than, say, for the countries in which USAID focuses).

Second and related, Prof. North infers from his “rethinking” that political institutions are required for impersonal exchange to drive and guide the underlying process of institutional adaptation. He sees this as posing a dilemma, since he believes we do not know how to create the political institutions.

Third, Prof. North identifies three “ways we get it wrong”, where by “we”, I understand he means economists or their policy paymasters. First, he believes that we do not understand reality, where I presume that he refers to the reality of society’s underlying informal institutions and their *de facto* incentive structures (what he calls the so called “institutional matrix”). Second, he considers that (a) our beliefs are about that which modulates economic activity and (b) the human environment is subject to “pure uncertainty”—the future is novel (i.e., technically that the world is non-ergodic). Third, he sees our policy tools as effectively operating only on the formal rules of society while *informal* norms are the principal cause of outcomes. Worse, our ability to enforce even the formal rules is limited.

Fourth and related to the previous point, introducing formal rules from the outside (a.k.a donor assistance) will produce radically different results where local beliefs and informal rules are different. Rather, the type and speed of change will depend on the prior evolution of the underlying *local* beliefs evolve in the face path-dependent endogenous economic and social change as well as on the nature of exogenous shocks to the system.

Finally, due to imperfections in political institutions, the path dependence of economic institutions, and the existence of transaction costs, there is no guarantee that a country’s formal and informal institutions will evolve (adapt) sufficiently efficiently to create an economically efficient “human environment” conducive for high economic growth. This leads Prof. North to offer a normative conclusion: government is needed to keep firms competing on price and quality rather than by other means.

Bottom line. After pushing us to recognize the importance of the institutional underpinnings of economic development, North now takes us one step further up the causal chain and asks us to focus on the role and formation of beliefs in generating our institutions.

III. Implications for USAID assistance

Let us endeavor to infer some implications from North's new insights for USAID's technical assistance programs.

Perhaps at the most general level, Prof. North's convincingly argues that effective and technical assistance yielding sustainable outcomes will require better embedding donor interventions into a the recipient country's cultural and institutional context. Formal institutions which emerged endogenously in one country may not be appropriate in another because *inter alia* the informal rules within which the formal institutions developed are different country-to-country. All too often in my experience, USAID consultants endeavor to transplant their expertise of the US model to the recipient country (Lin Ostrom has many examples of such failures in the water sector). Hence, USAID needs a framework, approach, and tools to acquire a deeper understanding of embedded environment and how to draw more on local knowledge and cooperation.

Second, it is likely that successful interventions may be more difficult than first thought to achieve. At one level, perhaps this suggests donors should have more modest goals. It certainly implies that the U.S. Congress must display greater patience for impacts, since the indigenous beliefs and institutions required for effective economic improvements require time to evolve.

Perhaps an example of a pseudo-institutional approach relates to donor enthusiasm for capacity building in the private sector. Subsidized training as well as business development services (BDS) are offered aplenty. Here the apparent economic logic is that due to the positive externalities of better run firms, individual firms will under-invest and so such assistance is appropriate. While this may be true, the incentive approach of Prof. North may reveal this to be another example of Say's Law of supply creating its own demand (which is, as privatization in Eastern Europe may also illustrate, generally not true). I suspect Prof. North here would advise us to consider why there is insufficient demand from the private sector for training or services, i.e., he might suggest we seek the obstacles (lack of incentives) for limiting the demand for knowledge, rather than simply focusing on its supply. As an example, in Romania rather than

subsidize the training of private sector environmental auditors we found that the lack of demand for training was due to a lack of market opportunity for auditors and of requirements for qualified auditors. The solution was to create a certification process, a requirement for certified auditors, and stronger enforcement of regulation requiring the auditing. Once this technical assistance was provided, the private sector began on its own to pay for its training.

Third—and consistent with the recommendations of Prof. Collier at Forum 2, given the degree of novelty North sees, perhaps USAID should increase its support for innovative approaches. In fact, this was a principal objective of the Forums Series' creator at USAID, Fred Withans. The Forums Series sought (seeks) to identify for USAID new technical assistance opportunities with more sustainable outcomes by developing analytic frameworks to elucidate, one the one hand, country-specific institutional obstacles to economic development and their underlying belief structures and, on the other hand, options for their remediation. The novelty of the approach requires different types of field preparatory work and draws upon new empirical techniques to test out interventions/ideas. The result to date has been the creation of a set of empirically based toolkits (i) to identify sources of transaction costs, (ii) to pre-test policy options to remediate them as well as gauge stakeholder acceptance, and (iii) containing evaluation techniques to embed *ex ante* into interventions for *ex post* assessment of the effectiveness of the outcomes. In one application under the Forums project, for example, these methods were employed to infer the importance of relationships among economic agents as a source of financing, marketing and technology, and what can be done to lower the transaction costs of creating and maintaining such relationships. In another application, the Project illustrated how to build evaluation techniques into the design of a USAID SME training activity in order to both assess its effectiveness as well as to infer what donor-controllable trainer incentives in the embedded culture—The Philippines in the example—would have the biggest impact on trainee performance.

These insights may carry implications for USAID's approach to assisting "failed states". Consider some examples. First, in light of the need to build political institutions, maybe USAID's reticence to work on supporting political parties should be rethought. While targeted support for particular groups would not be wise, given North's views on the limits of operating under "pure uncertainty", there are potentially numerous former and incipient groups, organizations, and even associations (*à la* Putnam) whose growth and capacity building could be supported. Second, USAID may want to redouble placing a heavy emphasis on education. Such

support could go beyond the standard practice of regulatory capacity building and strengthening the provision of lower and higher institutions of education. One example would be including, in addition to securing local collaboration, a well targeted marketing (public relations) campaign as part of a policy implementation requiring a modification of beliefs, institutions, or behavior. Third, USAID may consider placing greater emphasis on developing decentralized structures before centralized ones, since the transaction costs of political formation may be lower in the beginning, e.g., as Afghanistan may attest. Afghanistan may also be an example of inattention to historical detail: the United States appears to be focusing on installing a strong central government in a country with longstanding decentralized, tribal traditions. Finally, Prof. North's focus on beliefs leads me to the question of "legitimacy" of donor interventions. Iraq, for example, suggests that even the best of stated intentions may not be enough to create a welcome overture to USAID as a provider of technical assistance. This may be an example of where "belief management" appears to have been given at best short shrift.

IV. Points for clarification and extension

As adumbrated at the outset, the constraints of the forum medium precluded an exhaustive treatment of the new ideas Prof. North seeks to introduce. As such it is only natural for the reader to have points in need of clarification and suggestions for further development.

Questions for clarification. Perhaps the most obvious area for clarification is in the area of definitions. Consider several examples.

First, are "beliefs" informal rules? Which type of "belief" is key in the "model", since the paper seems to switch among them:

- Erroneous beliefs, e.g., printing money does not lead to inflationary pressures
- Positive beliefs, e.g., cheating others in my network will ruin my reputation
- Normative beliefs, e.g., cheating others in my network should ruin my reputation
- Baseless beliefs, e.g., my great-grandchildren will have a better life than I had
- All the above.

Second, Prof. North seems to define "institutional matrix as the structure of institutions...that determine [*sic*] economic performance." Is "matrix" a new concept or another way to express "institutional network", "institutional structure" (p. 10), "social fabric", or "social capital"? If so, why is a new term required?

Third, what do we mean by “*quality* of human beings” (p. 2), since North calls it both a driver of economic change and distinct from human capital and the “institutional matrix”?

Fourth, in the article, “human environment” seems to refer to realm of human interaction (page 3). Is this another way of saying “social interaction” or “institutional structure” (page 9)? Or both? If so, why is a new term required?

Fifth, what is the metric when we are told (page 13) that informal norms of behavior are more important than formal rules?

Finally, the reader would benefit from more examples of “perceived reality” and its effect on “beliefs”.

Linkages with the literature. There are several aspects of the paper that might benefit from linkages to the literature (which was, with the exception of a vague reference to Hayek, completely absent in the paper). For example, the discussion of the divergence between belief and reality occupies complete sub-disciplines of philosophy, e.g., epistemology. No connection to this body of work is made or taken advantage of. Similarly, the importance of belief and the human environment (Prof. North’s term) in the social sciences is the focus Kuhn’s (1962) seminal writings on the “paradigm shift” of which no reference is made. Finally, Prof. North’s discussion of adaptive efficiency of a country’s institutions is reminiscent of Olson’s (1982) concern of the rigidity of a country’s interest groups and their resistance to change. It might be both fruitful and appropriate to relate these threads together.

Possible completions and extensions. Clearly the process of how beliefs morph into institutions requires further research. For this, I believe there is a close isomorphism in the evolutionary and Darwinian models of biology. I hope Prof. North will pursue the evolutionary model and the adaptive process of aggregating beliefs into institutions (which, by the way, are quite different from the processes studied in political economy).

Among future applications of Prof. North’s approach, rather than Japan, which the paper makes mention of, a better example of the pitfalls of poor adaptive efficiency would likely be the Islamic countries in the second half of the Twentieth Century and beyond. This is a rich area where other prominent writers are also focused (e.g., Greif and Kuran).

While I believe that the question of how to develop (and measure) the adaptive efficiency of a country’s institutional matrix is of central importance, it seems a bigger issue for Europe,

Japan, or the newly industrialized countries than for USAID's key constituency, e.g., Sub-Saharan Africa, where radical regime change and not incremental change is called for.

V. Potential concerns

Let us now turn to a more critical assessment of Prof. North's paper. While no concern presented below will call into question Prof. North's views, of which I am fully sympathetic, they may point to where his "re-thinking" still requires further honing. Moreover, a clarification of some of the questions raised in the previous section may remove some of my concerns below.

First, and perhaps my biggest concern is that there does not always appear to be a clear distinction between Prof. North's assumptions and his conclusions. For example (p. 11), he assumes that the world is changing in novel ways (i.e., non-ergodically) and therefore concludes that we cannot predict the future. His argument supporting his assumption is that our tools clearly do not predict the future. Which, then, is the assumption and which is the conclusion? I have a similar concern about many of the propositions in his agenda listed above. Related to this is that the paper is full of assertions without any reference supporting the claims, e.g.: privatization was a failure in Latin America (p. 16), "humans...use their perceptions...to structure the human environment...to reduce uncertainties in human interaction" (p. 9), "[due to policy error] economic history is an endless depressing tale of miscalculation, leading...economic stagnation" (p. 13).

Second, Prof. North indicates that the "[r]ate of change will depend on the degree of competition among organizations and their entrepreneurs". I wonder if this categorical approach places enough stress on—and, therefore, guidance for—cooperative behavior. Business networks, trade associations, collusion, the mafia, industrial clusters are all examples of where "successful" strategies involved cooperation, not competition. In fact, the prevalence of institutions themselves illustrate the importance and power of cooperation. Surely, the narrow application of Prof. North's quote would lead to a rather incomplete understanding of processes on the ground.

Third, I also wonder whether a focus on *individual* belief acquisition might be just one part of our toolkit to understand institution formation and behavior. Otherwise, Prof. North's approach may risk repeating the mistake of neoclassical economics by placing insufficient stress on *social* nature of institutional equilibria, i.e., the aggregation across individuals (especially

regarding informal institutions). This is in fact mentioned in his discussion of adaptive efficiency, an evolutionary process which presumably is the result of *social* interaction.

Likewise, Prof. North's focus on beliefs may go too far in rejecting rationality. Belief formation is adaptive and, as suggested above, undoubtedly involves a social interaction as stable beliefs probably reflect evolutionary equilibria. Rationality on the other hand is purely individual and by nature forward-looking. Surely human beings have both tendencies? Moreover, is it not likely that individuals endeavor to act rationally (i.e., in their own best interest, given their beliefs) and still have irrational beliefs? How does Prof. North determine that an irrational outcome was the result of irrationality or erroneous belief structures? Perhaps what is needed here is a better explanation of the time dimension. Perhaps beliefs adaptively evolve to resolve real problems but, as theorized in behavioral psychology, when the situation changes the beliefs may remain, becoming maladaptive or "irrational".

Prof. North also seems to suggest that when we are not successful in controlling our destiny it is because we do not engage in rational behavior, which he says "would entail full knowledge of all possibilities and contingencies". While this would be the case in countries with an all-powerful sovereign, it is hard to see "miscalculation as the principal cause of bad policy. Again bad outcomes could be the result of principal-agent failure with the leaders (principal) optimizing over a short-term horizon and myopic to the long run.

Fourth, the issue of economic theory's penchant for prediction is another target within Prof. North's sights. In fact, there seem to be two agendas here: (i) stop using neoclassical models and (ii) let's find out how economic agents really make decisions, i.e., how they make decisions under erroneous beliefs. Here, Prof. North believes that (i) since (if) the world is changing in novel ways then our policies predicated on predictions from models routed in past regularities are going to be wrong *and* (ii) (Bayesian) "updating" our belief system will never be able to catch up so as to coincide with reality. This raises several issues. First, is belief-coinciding-with-reality the equilibrium concept that Prof. North is proposing? Second, how well does this assumption of the impossibility of predicting social outcomes accord with his views on the pre-eminent role of path-dependence for outcomes? Lastly, while clearly we cannot know today what we will know and believe in the distant future, what evidence do we have that our predictions are biased? If they aren't, then it is an empirical question as to in what class of cases it be better to do nothing than to act on "noisy" predictions.

Fifth, given the length of calendar time required for the process of changes in beliefs to transpire and for institution formation, the reader would benefit from a discussion of the relevant time frame(s). This is especially relevant for USAID technical assistance since (i) USAID needs to have a realistic expectation as to when they should expect the consequences of their interventions to be observable and (ii) the appropriate time period would influence the length of the period required for mission analysis prior to intervening. Prof. North's examples are not always sufficiently helpful, however. For example, he uses the impact of Enron on the American public as an example of belief change (p. 21) but also indicates that fifty or a hundred years are appropriate to make statements about change (p. 12).

Sixth, Prof. North explicitly recommends one examine belief processes *independently* from human capital processes. This seems problematic conceptually due to the likely feedback process between human capital accumulation and belief formation. First, the level of a person's human capital may influence the degree beliefs are maladaptive ("erroneous"). Second, the speed at which a person's beliefs are acquired and evolve probably depends on the level human capital. Third, certain beliefs may impede the process of human capital deepening.

Seventh, further work may be required to associate processes in Prof. North's belief-institutions nexus to the direction of causality. Isn't "perceived reality" the same as "believed reality", or at least reality perceived through the lens of beliefs and, if so, how does the former lead to the latter? Why do beliefs "lead to an elaborate structure of institutions" and not the other way around or simultaneously in both directions (by different processes and time frames)? In any event, if "reality" is only "perceived" and perceptions operate through beliefs, then it is not clear how a divergence can occur. Following Kant, isn't reality "inter-subjective" (i.e., what is commonly experienced and agreed by a group of observers)?

Eighth, it is a bit odd that Prof. North takes the Soviet Union as an example of "an institutional matrix...continually being modified", thereby illustrating adaptive efficiency.

Ninth, Prof. North states that the purpose of institutions is only for uncertainty reduction. This seems unnecessarily limiting. Aren't institutions also created to reduce the costs of coordination and collective action through time?

Finally, it is not always clear just who the main target of attack for Prof. North: economists, policy-makers, country elites, those with maladaptive beliefs, or outcomes of

institutional processes? And anyway, since economic theory is just a belief and, according to North, belief is how humans make choices “in the face of pure uncertainty”, why castigate economic theory?

VI Conclusions

As stressed at the outset, previous contributions of Prof. North have changed the way development economists approach their work. Prof. North has continued to push the envelope of the knowledge frontier up the causal change to the issue of institution formation. This has taken him into the realm of the role of beliefs and their interaction with the human environment (a.k.a. the web of formal and informal institutions comprising human interaction). His current paper, which is necessarily short and non-technical, may skim over such niceties as rigorous definitions, syllogistic logic, and references to past literature, but it succeeds brilliantly in whetting our appetite for things to come. Once again, his efforts are likely to stimulate a growth industry to pursue the implications of his insights.