

META-RULES

by

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Abstract

Meta-rules, or rules for making rules, determine the costs of innovation and thus the pace of economic growth. Adapting rules to a changing economic environment through explicit, well-designed meta-rules makes economic growth quicker, less painful, and more certain than adapting rules through chance-based evolution.

I. Introduction: North Re-examined

Two concepts are at the heart of North's theory of economic growth (1970). He calls the first "secondary institutions," defined as rules or property rights. This essay calls these simply *rules*. North calls the second concept "fundamental institutions," defined as "the basic 'ground rules' such as the underlying 'constitutional' basis of property rights and basic decision rules with respect to political decision-making (1970, p. 10)." This essay calls these *meta-rules*, that is, rules for making rules.¹ The term *institution* here refers to a collection of rules, including perhaps meta-rules. An *economy* is a collection of institutions governing the allocation of resources and the production, distribution, and consumption of goods and technologies.

North suggests that the growth of Western Europe resulted from "cumulative changes in secondary institutional arrangements [rules] (that) ultimately led to a restructuring of fundamental institutions [meta-rules] (1970, p. 10)." The accumulation of *de facto* rules embodying practical, grass-roots responses to changing material and technological conditions eventually led to revolutionary changes in formal meta-rules, channelling incentives away from activities that served to redistribute income and toward activities that raised the productivity of income-generating activities. Economic growth resulted.

¹ For example, the law setting the majority required to pass a new law is a meta-rule. There are at least three reasons for preferring the usage of *meta* as a prefix which indicates that the concept signified by the root word acts upon that same concept itself. First, the usage is easily adapted to multiple levels of self-modification, such as meta-meta-rules. Second, unlike North's terminology, the practice generalizes sensibly in diverse contexts: second derivatives are meta-derivatives, compound interest is meta-interest, teacher education is meta-education, and consciousness is meta-thought. Third, the usage is common in the study of cognition and genetics (e.g., Hofstadter, 1979, pp. 687-688).

Long-run growth requires that economies adapt their rules to changing material and technological conditions. Meta-rules determine the costs of adaptation and thus the pace of economic growth. North submits that economic growth resulted when informal changes in rules led to changes in meta-rules; this essay submits that continuing economic growth can be facilitated if changes in rules are guided by explicit, consciously designed meta-rules. Economic growth would be quicker, less painful, and more certain if rules (and meta-rules) evolve gradually and consciously under the guidance of meta-rules than if revolutionary changes in meta-rules follow from haphazard, evolutionary, *ad hoc* changes in rules themselves.

This essay is organized as follows. Section II introduces a useful analogy, that institutions are to economies as genes are to species. Section III discusses the design of meta-rules, and Section IV discusses some of the potential benefits and dangers of the conscious manipulation of meta-rules.

II. Institutions:economies || genes:species

Just as institutions are collections of rules that constrain and direct the behavior of economic agents by specifying rights and methods to allocate, benefit from, transform, and transfer resources to satisfy preferences, genes are collections of rules that constrain and direct the behavior of living organisms by specifying actions and abilities to find, secure, and use resources to satisfy physiological wants.

Both institutions and genes embody meta-rules because they specify how to modify themselves. For example, a constitution may provide for its own amendment, or genes may provide for their own recombination. At a deeper level, economies and species may modify how they modify themselves and thus embody meta-meta-rules. For example, the majority required to amend a constitution may itself be amended, or asexual mutations may lead a species to produce genetic variation by sexual recombination.

Because the environment changes constantly, economies, just like species, evolve or die. As expressed by North (1994, p. 367), "It is adaptive rather than allocative efficiency which is the key to long-run growth. Successful political/economic systems have evolved flexible institutional structures that can survive the shocks and changes ... " Meta-rules may exist to facilitate the adaptation of rules, but meta-rules may be non-existent, as with a constitution that does not provide for its own amendment, or ossified, as a constitution amended so that all future amendments must pass unanimously.

1. Meta-rules and development

For both species and economies, *development* may be defined as self-modification that promotes short-run survival without compromising the long-run ability to self-modify further. Just

as a mule can withstand hostile environments but is an evolutionary dead-end, a rule may promote short-run economic growth but, without luck or a meta-rule, will eventually lead to stagnation and decline as the economic environment changes and the rule becomes increasingly inappropriate. "Societies that get 'stuck' embody belief systems and institutions that fail to confront and solve new problems of social complexity (North, 1994, p. 364)."

A rule without a meta-rule is like a contract that does not specify how to recontract. Changes can be made, but they will depend on bargaining power rather than on rights, occur abruptly rather than continuously, rely on luck rather than on design, and perhaps arrive too late to salvage the life of the contract or the health of the economy.

2. Meta-rules and death

Why do people die of old age? Understanding how the death of individuals can promote the survival of the species sheds light on the role of meta-rules in economic development.

Although the environment never stops changing, the genes of an individual are fixed forever at conception. The average member of a younger generation should have some genetic advantage over the average member of an older generation because the genes of the younger generation have benefitted from more rounds of natural selection, rounds occurring in the most current (and thus most relevant) environments.² Because resources are scarce and because older individuals of a species are less well-suited to the environment than are younger individuals, the survival of the species is promoted if older individuals die and free up resources for younger individuals.

² Members of the older generation presumably reproduce after self-selecting by some signal of suitability to the environment, usually physical health. Members of the older generation poorly suited to the environment should be less healthy and thus should have less reproductive success.

The faster the environment changes or the more a species depends on instinct or on physical features for survival, the more frequently variation is needed, the closer the spacing between generations, and the shorter the life span. Evolution selected for humans who, in the span of 35 to 40 years, could reproduce, teach basic skills to their children, and die, freeing up resources. The success of humans can be attributed to the evolution of features (such as lips, thumbs, the cerebral cortex, and culture) providing a generalized ability to adapt.

In fact, adjusting to changes in the environment through learning has overtaken genetic variation as the most efficient adaptation strategy for humans.³ Instinct and passive learning through trial and error are not no longer adequate for humans; purposeful education is required. Economies are no different. The unconscious evolution of rules has little hope of keeping pace with accelerating changes in the economic environment; the conscious design of meta-rules can improve the odds.

Although the survival of species requires the death of individuals, the survival of economies need not require the death of institutions. The birth of a completely new set of institutions at a constitutional convention is appropriate only if a polity wishes to bury the lessons embodied in the institutions being replaced. In other cases, some of the rules within the set of rules that comprise an institution may be changed without conceiving the entire institution again from scratch. Meta-rules facilitate orderly adjustment.

³ Because mental capital matters more than corporal capital and because an individual's mental capital is lost at death, the survival of the human species would probably be promoted by longer lives than those that result from the current genetic blueprint, appropriate for an environment that has long since passed away.

III. The Design of Meta-rules

Individuals must die to make room for new models, but institutions can replace parts piece-meal. Institutions are not conscious, nor do they anticipate the future, but they may be designed so as to be affected by human consciousness and expectations for the future. Although humans cannot redesign themselves, they can redesign institutions, especially if the institutions were created with redesign in mind. There is room for reform of meta-rules because they are not always explicit nor carefully designed.

1. Explicit Meta-rules

Meta-rules are often understood rather than stated. According to North, "The fundamental institutions [meta-rules] may be specified in a constitution or may exist by legal precedent or perhaps only by custom. Sometimes the way these fundamental institutions can be changed is specified (meta-meta-rules), as in the rules for amendment of a formal constitution, but more often they are not (1970, p. 10)." Implicit meta-rules are more likely to be opaque than are explicit ones. Rent-seekers can subvert customs more easily than codes.

The transition economies of Eastern Europe provide an example. The leaders of the early communist state did not foresee their shortsightedness, and they did not provide a peaceful way to change the government or the economic system. Making up the rules as they go means almost as many errors as trials.

A second example are non-governmental organizations (NGOs) that lend to microenterprises in developing countries. The donor agencies and social workers who conceived these institutions never foresaw that the flow of soft money would slow to a trickle and that

survival would require profitability. Without a built-in guide to transformation, the metamorphosis to for-profit institutions is extremely painful, and many NGOs will die.

2. Designed Meta-rules

A weakness of evolution is that variation depends on chance, and there is always the chance that no new well-adapted entity will develop. To mitigate this, species encourage serendipity by systematically producing genetic variation. Economies can likewise encourage systematic adaptation by consciously equipping institutions with meta-rules.

Individuals and institutions have some capacity to adapt even in the absence of genetic variation or meta-rules.⁴ But just as evolution does not produce all useful adaptations, the institution of the market does not produce a complete set of rules. The economic environment changes too fast for the unconscious adaptive ability of institutions.

Institutional design should recognize that design cannot anticipate all contingencies. Therefore, design should provide for changing the design. Non-conscious meta-rules change rules too slowly and too haphazardly. As expressed by North (1994, p. 364), "Human beings have, by trial and error, learned how to make economies perform better; but not only has this learning taken ten millennia (since the first economic revolution), it has still escaped the grasp of almost half the world's population."

⁴ For example, muscles (and presumably brain interconnections) develop with use. In the case of institutions, informal practices may circumvent useless or counterproductive formal rules.

IV. Potential Benefits and Dangers of Meta-rules

Explicit, designed meta-rules should make policy reform more gradual, practical, and peaceful. Crisis is required to trigger policy reform only if the system cannot adapt itself gradually to small disequilibria. Designed evolution has several advantages over the dialectical revolution of Marxian/Hegelian thesis-antithesis-synthesis:

- It is peaceful rather than violent;
- It is gradual and continuous rather than sporadic and abrupt;
- It provides for mid-stream redirection to avoid overshooting the target or throwing out the good with the bad.

If policy reform is worthwhile because changing rules acts as a lever that multiplies the potential of efforts to improve welfare, the design of meta-rules should be even more attractive because it acts as a lever of levers that exponentiates the potential to improve welfare.

Unfortunately, meta-rules also exponentiate the potential to damage to welfare with poor policy. Just as tinkering with Nature can produce monsters, meta-rules attract both reformers and rent-seekers. Designing meta-rules that balance protection from rent-seeking against openness to reform is no easy trick.⁵ Too much flexibility leads to instability, and policies that are easy to correct are easy to subvert. Eliminating rent-seeking would fossilize all rules and doom an economy to extinction. If any or all rules can be changed at any or all times, the transactions costs of considering potential changes could outweigh the benefits of being able to make changes. If modifications are unlimited, potential rules may never become an actual rules.⁶

⁵ The bitter debates over the centralization of power in a federalist European Union are an example.

⁶ This is why Congress tied its own hands by giving fast-track authority to GATT.

Even explicit, designed meta-rules may not promote economic growth. In fact, North (1970, p. 7) suggests that many (if not most) meta-rules serve to *reduce* the efficiency of the economy. Meta-rules may facilitate changing rules to redistribute income to rent-seekers in addition to (or instead of) increasing the productivity of income-generating activities. For example, the ruling party in Puerto Rico recently designed a bill to increase the number of judges in its Supreme Court from seven to nine. Had this proposed meta-rule been passed, neither productivity nor adaptability would have increased, but the party in power would have graven its position into future rule-making.

There are some principles or safeguards for the design of meta-rules. First, not all rules can be subject to meta-rules. At the end of a meta-...-meta-rule chain, there must be either an unchangeable rule (such as decision of the Supreme Court) or a meta-rule that acts on itself (such as a majority required to amend laws that also applies to the majority required to amend the majority required).

Second, irreversible decisions (such as treaties with other polities) should be more difficult to approve than reversible decisions.

Third, rent-seeking can be reduced if the (untradable) weight given to any given individual in the political process corresponds to that agent's weight in the social welfare function. For example, utilitarianism should provide for simple majority rule with one vote per person. Wealth should not be allowed to influence voting because individual utilities in the social welfare function are not weighted by wealth.

Meta-rules may backfire. This will occur less often, however, if meta-rules are designed, rather than left to Nature, and explicit, rather than implied. Conscious design of meta-rules may

lead to the adaptation of rules to the ever-changing economic environment at a pace conducive to survival and perhaps even growth.

References

Hofstadter, Douglas R. (1979) *Godel, Escher, Bach: An Eternal Golden Braid*, Vintage Books, New York.

North, Douglass C., and Robert Paul Thomas. (1970) "An Economic Theory of the Growth of the Western World", *The Economic History Review*, Second Series, Volume 23, No. 1, pp. 1-17.

North, Douglass C. (1994) "Economic Performance Through Time", *The American Economic Review*, Vol. 84, No. 3, June, 1994: pp. 359-368.