

# The golden rule of freedom: a fable for policymakers\*

(IN RESPECTFUL MEMORY OF PROF. ALBERTO ALESINA)

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*In 1965, Nobel laureate Edmund Phelps published his fable for growthmen, a seminal paper on what became known as the “golden rule of capital accumulation”. This paper takes up the same format – a fable – with a special focus on the link between economics and political science. We presume that economic and political patterns can be described by the same principle. Introducing a societal stability function we prove the existence of an optimal policy for societal stability and analyze general equilibrium. Stability properties are noted.*

*JEL codes: JEL.: A12, E10, E22, E61, H11, H41*

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## I. An old story - revisited

The kingdom of Solovia is doing fine. Oiko Nomos, the king, has governed his nation wisely after having saved her from hardships. Quite some years ago - it must have been in the early sixties of the 20th century - the country had experienced serious economic challenges. The former king set up a contest open to all citizens

to find a scientifically valid policy concept, a rule, to overcome challenges. A fellow by the name of Oiko Nomos, an economist by training, entered the contest, won the prize and married the daughter of the king. After the death of his father-in-law, Oiko Nomos became king himself. In the following years, his government followed the rule. The pursuit of the rule, so ingeniously proved by Oiko Nomos himself, had ensured that consumption per head was all time high. Even more importantly, this blessing would last until the end of time. Later, after a Nobel-prize winning professor had published the rule in this journal (Phelps, 1961), the rule became known as the Golden Rule of Capital Accumulation. The rule states that, given an indefinite time-horizon, consumption per head is maximized if investment per head equals profits per head. The rule was coined the Phelps Theorem after the scientific community had discussed it intensively.

It turned out that the rule worked well in Solovia. Consumption per head grew steadily at a stable rate. But even the king admitted that refinements of the rule were necessary from time to time. Pollution of the air, water and even soil had increased to an alarmingly high level. Public poverty contrasted with private wealth. Income proved distributed distressingly unequal among citizens. Real business cycles called for governmental intervention. The skills of the politically independent central bank were challenged by inflationary threats. Notably, market distortions and their most harmful effects became politically relevant only years later, after having been acknowledged already by eminent scientists like Pigou, Keynes, Friedman, Lucas, Sen and others. Given considerable time lags, government interventions were fitted to phenomena properly. Governance was surprisingly efficient because of an excellent public administration. The social notion of wealth had changed too: what was once measured by real GDP was now measured by an aggregate called National Welfare, holistic concept of economic and social well-being. The new patterns necessitated more state intervention and restrictions to individual freedom but paid off to a degree – economic wealth

increased nicely, even based on the new holistic concept of national welfare. The golden rule still held true: politics following the line of the golden rule ensured an optimal increase of consumption per head until the end of time.

## **II. Times are changing**

Surprisingly, citizens of Solovia still expressed discomfort with politics. Public opinion polls, local election results and enunciations of doctrines and narratives showed that many people were not happy with their options especially with regards to their ideas of the pursuit of happiness. They complained that Oiko Nomos and his government had put too much emphasis on increase of economic wealth, even given the holistic concept of welfare sketched above. Many people felt somewhat disappointed because, as the saying goes, there is more to happiness than money, high living standards and high consumption. The government, however, was taken by surprise, and decided to keep Solovia from social unrest, political instability or revolution. Unfortunately, the government had not the slightest idea about what kind of action was needed.

Oiko Nomos, however, recalled the old times before he became king himself and called for a contest aimed at finding and proving a scientifically valid golden rule for politics beyond capital accumulation. The winner had the right to marry one of the children of Oiko Nomos and to become his successor when the day came. To cut a long story short, philosophers, sociologists, political scientists, priests and even authors of best-selling books came forward, presented their case just to be sent home by the newly established “National Committee on Political Change Research”. No solution to the riddle proved to be valid scientifically on the basis logical consistency and empirical validity. The government, being desperate, asked for dismissal, the king was about to resign to allow for a regime change, but good fortune struck again. A lady by the name of Poloika volunteered and stated her

readiness to explain matters. Poloika was well familiar with the subject. She had worked at excellent universities and think-tanks, even research departments of banks, lobby groups and governmental as well as non-governmental organizations. She had studied the methodological grounds of traditional theories of economic policy a la Max Weber and Jan Tinbergen. However, she had not been happy with what she read. Aims and means were taken as presents from an obviously benevolent actor –the state. Axioms and parameters of yet sophisticated theories of public policy did not cope with the macro-challenges of the political decision-making process and economic repercussions. A fresh look seemed to be necessary.

### **III. Societal Stability - a political economy approach**

Invited by the Committee Poloika powered up her laptop and started her presentation by presenting her stability function

$$S = S(W, F) \quad S'_W > 0, S'_F > 0,$$

and S modelling the stability of the nation. She argued that political stability depends on the freedom to choose, economically and politically. Economic well-being is not everything, she said, liberty is important to people as well. This insight has been well-known among philosophers, the awareness of the principle itself being as old as mankind (Deuteronomy 8:3). Her political stability function embraced this concept by getting down to business of social science with W for Wealth (national welfare in real terms, the holistic concept) and F for the degree of freedom defined as an indicator of individual decision rights of people regarding their pursuit of happiness. According to Poloika, her concept of the stability function seemed to be a promising new approach to link the economic and political rationale. Economics were dealing with the allocation, distribution and creation of wealth constrained by the scarcity of resources. Political science focused on the creation of human societies and the allocation and distribution of personal freedom

rights constrained by individual views on personal happiness. Treated on the same axiomatic grounds they made sense combined when it came to societal issues. People do not only optimize utility according to economic needs, but also to personal freedom, the right to pursue their own road to happiness. They fight for the liberty to decide for themselves on their performance in life. Yet, liberty needs the rule of law, individual freedom rights had to be restricted to secure societal cooperation and to tame pure egoism. Indeed, and as described by Hobbes, the natural state being shaped by fear, precariousness and people thirsty for fame had never been a role model for Solovians. To make things clear, Poloika adjusted her stability function by

$$S = S(W, R) \quad S'_W > 0, S'_R < 0, \quad \text{and } R = 1/F$$

This version of her stability function described her view about perfect substitutability between Wealth and Freedom even better, and together with first-degree homogeneity of the S-function, increased technical practicability of her model. R defined constraints to liberty of people, to a certain degree even necessary for freedom. But restrictions to individual decision rights – repression for short – also evoked the potential misuse by those who enforced or institutionalized power to decide about others. Solovians, too, feared the potential misuse of power by hogging, narcissistic incumbents. Enforcement of decisions was based on power, constraints to power being unequally distributed in favor of the incumbent and to the disadvantage of the challenger. Decisions and assertiveness of both partners determined the stability of regimes endogenously to economic welfare and liberty. Even though feudal, autocratic, hybrid and democratic systems were grounded on the same principle, they differed significantly by systemic constraints and their impacts.

As it happens, the notion of substitutability between the main causes of societal stability has been well known in Solovia already. The so-called social contract

defined an arrangement – explicitly or implicitly – by which the populace agreed to restrictions of liberty in exchange for governmental politics which met expectations of people regarding their desired wealth/repression rate  $W/R$ . If incumbents respected the pact, people had no incentives for a change. In case of violation, the populace would consider challenging the arrangement. Given constraints, established pacts were welcomed only if they worked to the consent of both actors – incumbents and populace. Otherwise, actors would take issue with the established arrangements. Resistance to power – exit or voice – had to be organized by challengers to become politically relevant. In most cases Incumbents reacted by increasing repression. Poloika coined the social pact  $r$ , the Rousseau-coefficient, in loving memory of her great grandfather defined as an indicator for equilibrium of societies with no incentives for a change. At this moment of time a certain grumbling of economists among the Committee could not be overheard. In return, Poloika pointed to shortcomings of utilitarian ethics and Arrow's impossibility theorem. Contrary to orthodox theories of aggregation of individual preferences she was out to focus on the societal process of preference aggregation vis-a-vis controversial or agreeable solutions for societal stability. Some empirical data of  $W/R$  serving as evidence for the status of nations, their well-being as regard to freedom and wealth had already been presented (Bolle, 2018). However, the notion of  $r$  as an equilibrium value was more ambitious and served in her model as an analytical corner stone of a theory of governance and the search for liberty.

### **III. A world of hopes and scarcities**

#### *A. Politics, markets and limited resources*

As expected, the next part of her presentation was somewhat uncontroversial given the state of the art of economic science in Solovia. To please youngsters and the non-economists of the Committee, Poloika repeated shortly what was known

about the creation of economic wealth and the golden rule of capital accumulation. The well-known Cobb-Douglas production function grasped the production of wealth by real capital  $C$  and labor  $L$  on the grounds of technical knowledge with  $m$  as the rate of elasticity of real capital. Patterns of labor supply were well-behaved in Solovia with full employment. Labor input  $L$  constituted together with technical progress (innovation, improved technology, artificial intelligence et cetera) an exogenous, continuous and constant impulse  $g_T$ . Together with real capital (including natural resources), the real rate of growth of annual wealth produced (measured by a holistic concept of real gross domestic product) was identified as

$$(1.1) \quad g_W = mg_C + ng_T \quad \text{and} \quad n + m = 1$$

Because of well-designed and well-controlled economic and monetary politics together with striking stable expectations and preferences of its residents, Solovia also enjoyed a robust savings rate  $s$  and investment rate  $i$ . Investment included public and private investment; public investment exhibiting a lower productivity with a productivity differential depending among others on the level and quality of government intervention. The public budget (expenditures matched the implementation costs of policies and were financed by a tax on income). Economic relations with foreign countries were balanced. The financial markets did not show signs of decoupling from the real economy. The nominal interest rate equaled the real interest rate mirroring time-preferences and correctly expected the rate of return to capital which in turn equaled marginal productivity of capital. Given these conditions it was safe to model the growth rate of capital  $g_C$  as

$$(1.2) \quad g_C = i \cdot k, \quad k = W/C$$

There was another nice quality about Solovia. Markets worked smoothly; distortions were handled efficiently by the state. Because capital was malleable, the capital/labor ratio of production reacted promptly to the prices of factors of production. The equilibrating mechanism of factor prices ensured that, given the

saving rate, production and accumulation i worked efficiently at  $s = i$ . Productivity of capital  $W/C$  reflected a corresponding marginal productivity of capital, determined by factor prices, signaling scarcity of factors.

Except for economists and youngsters most members of the Committee were fast asleep by now. Poloika decided to make a long story short and to concentrate on equilibrium patterns only in which expectations of actors were fulfilled and no actor had reason to change plans. She referred to the simple fact that once the economy had reached its equilibrated level of capital productivity, growth rates of capital and wealth were resized and given first degree homogeneity, the economy was running full speed featuring at, as she called it, a sustainable rate of growth  $\bar{g}$ :

$$(1.3) \quad g_W = g_C = g_T = \bar{g}$$

The sustainable rate  $\bar{g}$  was independent from the investment rate  $i$  (or its twin, the saving rate) because of the flexibility of the capital-labor rate determining capital productivity. In case of politics of investment in real capital being too high compared to the scarcities of resources, Solovia experienced a stable and smooth adaptation of the rate of growth of wealth towards the sustainable rate. This happened due to market-based reactions of factor-prices. Marginal capital productivity would fall, and the growth rate of wealth declined to its sustainable level. The same process would work upwards in case of investment too low. The sustainable growth rate of wealth proved to be independent from the investments rate. But different saving rates tackled consumption. Consumption would be high at the beginning of periods of slow growth and low in times of high growth. In the long run scarcity of resources was not to be beaten by choosing, say, a low and politically determined investment to please the older generation. Markets could not be cheated in the long run especially not by using natural resources for free. To avoid expectations being disappointed in the long run, to promote reliability and to ensure the stability of government or, even more importantly, the survival of the regime, politics had to respect these limits to sustainable growth. Any increase of

the growth rate of wealth beyond its sustainable rate (e.g., politics nudging a higher saving and investment rate  $i$ ) would mean a loss of consumption. Regarding the rate of growth this policy would work in the short run only anyway. After short growth would fall back to the sustainable rate because of scarcity of resources signaled by market prices. The opposite case, a low investment rate, might increase consumption per head in the short run. The corresponding increase of marginal productivity of capital would, however, not be sufficient to be compensated in the long run after growth had fallen back to its sustainable level again. This exactly has been the message of the golden rule of capital accumulation. The theorem of Phelps proved that there was only one investment rate which ensured optimal labor productivity (or income per head) by which consumption per head was maximized in the long run. This golden age had been accomplished if, given the role of money in Solovia and because of decreasing marginal productivity of capital, the marginal return on capital equaled the real interest rate. Preferences of people as well as monetary and economic policies had to be such that investment equaled saving and with respect to the golden rule

$$\varphi: \quad \frac{P}{W} \stackrel{!}{=} \frac{I}{W} \quad \text{and} \quad g_W = \bar{g}, \quad (P = \text{Profits})$$

After the story of the Phelps-theorem had been told, Poloika felt a bit tired. The Committee, however, was lively again and - well, more than angry. Did they waste their time by listening to what was well-known anyway? They all agreed that the golden rule of capital accumulation including its stability properties (though vividly debated!) was common wisdom of economists. And the golden rule was about economics!! What about the promise of a rule for politics? The Chairperson suggested a short break.

### *B. Sentiments, preferences and politics*

The session was taken up again and Poloika went on with the second part of her presentation referring to politics. She started referring to Paul Samuelson himself, reportedly having said “that the good lord gave us two eyes”. Indeed, up to now, she had sketched the paradigm underlying her reasoning, details of the economics of societal patterns and impacts on policies supplied. On the grounds of her political stability function, she applied a similar technique as before and defined  $\bar{S}$  demand for social stability according to preferences of people. Turning to her political stability function she also specified  $\bar{S}$  by a CES–function

$$(2.1) \quad \bar{S} = W^\alpha R^{-\beta} \text{ and } R = \frac{1}{F}$$

$$(2.2) \quad g_{\bar{S}} = \alpha g_W - \beta g_R \text{ and } \alpha + \beta = 1$$

She also repeated her intention to deal with equilibrium patterns only, in which case demand equaled supply of policies on the grounds. On the grounds of (2.2) and pointing to the equilibrium (and optimal) sustainable rate of economic growth  $\bar{g}$  she identified the demand effects of policy by

$$(2.3) \quad g_{\bar{S}} = \alpha \bar{g} - \beta g_R$$

Three patterns of  $g_{\bar{S}}$  were visible depending on the weighted difference between the steady, sustainable rate of growth and the politics of repression. The well-being, the stability of the nation, proved to be dependent on both, the economic performance and political decisions of the incumbent as regard to the existing social contract. Like the invisible hand of the market, the visible hand of the state could be benign, but also an iron fist. Smilingly Poloika whispered inaudibly: “With all due respect, Mister President, sir, politics matter, too”.

The Committee was struck by the pragmatic procedure of Poloika. An elderly member of the Committee, having been in Cambridge (well, Cambridge, England) argued that repression has given a sign – R – but not a scientifically valid meaning.

He vividly remembered late professor Joan Robinson's criticism (Robinson, 1962) on the evidence of signs like "capital" (C) and "utility" (U) in economic models. Poloika, having visited MIT (Cambridge, Mass.), stayed cool and pointed to logical consistency of her model. She even referred gratefully to empirical tests of her approach by a member of her working group, Jonathan Old, who had tested the model on the grounds of multiple linear regression methods. Whereas the degree of correlation showed a low level only, (well, equilibrium model vs. real data), tests came up with proper and plausible coefficients for  $\beta$  and  $\alpha$ : as for R elasticity  $\beta$  ranged between 0.14 to 0.38 decrease in stability, as for W elasticity  $\alpha$  between 0.25 to 0.92 increase in stability (Old, 2018). Empirics tallied with the approach. The assumption of substitutability of wealth and repression was substantiated and politics had a decisive influence on the stability of the nation, especially in the long run. Results suggested the existence of various combinations between wealth and freedom to stabilize societies (and the political regime). Governments had the choice between numerous options even with respect to equilibrium pattern of societies. Governments most certainly would try to shape and frame preferences of people regarding desired balances. It could secure the status quo, i.e.,  $g_S = 0$ , raise expectations for a better life or force people to accept low rate of  $r$ . Societal equilibrium was possible at various parameter values, divers across cultures and nations, over time and individuals, it might be stable or not depending on an identifiable core cause – the rate between expectations of people regarding the desired rate of wealth to repression and scarcity of resources. The Committee, having listened silently, came back to life in a flap. Dependent on their personal beliefs some members were shocked, others applauded. Some members of the Committee assessed benefits and costs of options according to doctrines (and personal hopes for their future political survival). The chairperson called for order and turned back to Poloika. Disappointed and frustrated, he reminded Poloika that she had promised a rule for policy makers. Now, she came up with options!

#### IV. Stability and repression

After the dust had settled, Poloika continued patiently. First, she explained, that analyzed by equations (1.1) to (1.3) sustainable growth of wealth was determined by  $\bar{g}$  and that economics had to be respected by politics to avoid turmoil in the long run. Secondly, politics had to honor preferences and expectations of people as expressed by  $r$ . If the social contract  $r$  had been a Nash-equilibrium from the beginning and the result of voluntarily negotiated decisions  $r^*$  between the state and the populace at the birth of the nation, politics had to follow the rule to ensure both, sustainable growth and the Nash-Rousseau condition. Once the social contract was agreed on by the incumbents and the populace, it had to be carried out accordingly. Otherwise, actors would take action and destabilize the political order. Not to be taken as a showoff, Poloika immediately presented her conclusion for stability-oriented (good?) governance. The required repression rate  $g_R^*$  (required for the equilibrium setting of a society; optimal according to the mathematical connotation) had to follow the algorithm

$$\pi \quad g_R^* \stackrel{!}{=} \frac{\alpha}{\beta} (\bar{g} - g_{\bar{s}}e)$$

rational of policy makers (incumbents/populace)  $r \stackrel{!}{=} r^*$

rational of economic actors (producers/consumers)  $k \stackrel{!}{=} k^*$

expected W/R supplied  $g_{\bar{s}}e$

The audience's puzzlement was tangible, nobody commented. Poloika noticed that she had asked too much of the Committee with what she had considered a glorious finale. The core of her reasoning had to be made clear again. After a sip of water, she clarified once more that her approach to policymaking concentrated neither on wealth nor freedom alone but on the ratio between both decisive elements of societies. To deliver stability the pattern of repression had to be such as to ensure both equilibrium conditions for societal stability  $\varphi$  and  $\pi$ . This dynamic, moving

and fragile equilibrium ensured the survival of the government, the regime and even the nation. If initial  $r$  had however been enforced by a Hobbesian Leviathan, turmoil towards improvements to a voluntary Nash-equilibrium would have started right away on the road to  $r^*$ . Current and expected values of the Nash-Rousseau coefficient  $r^*$  and the efficient use of resources following the golden rule then defined policy conditions for societal stability and reliability. If one actor violated the social contract  $r^*$  other actors would respond by exit or voice. If the state did not deliver what has been promised by  $r^*$ , the populace would challenge the incumbent by organizing collective action. If preferences of the people changed because of learning due to better education or technological changes, expressed by variances of  $r$ ,  $\alpha$ ,  $\beta$ ,  $n$  or  $m$ , the government had to listen and to act accordingly to stay in power. It could, however, try to buy support of the populace by stimulating growth (not working for long, as Poloika had explained above) or to suppress the will of people by increasing repression. This policy would destabilize the regime even more by lowering productivity of investment because of the productivity gap between public and private investment, income per head decreased because of substitution and income effects.  $r$  deviated even more from  $r^*$ . Even  $g_{\bar{s}}e$  did not fall like Harrod-neutral manna from heaven like  $T$  when Solovia was still young. Experiences of people about historical patterns of societies constituted expectations.  $r$  varied with reliability of politics, with repression and, most of all, with economic wealth and its distribution. When a country got richer and people more educated, their taste for sharing wealth, for being involved in political decision making, in short, the cry for freedom increased  $r^*$  at least with the same speed as economic wealth. And as the golden rule made clear: Pressure on governments to reduce  $g_R^*$  grew with the difference of the sustainable rate of growth and hopes for a better future as expressed by  $g_{\bar{s}}e$ . If people started to show their discontent by hitting the streets, perhaps even violently, higher repression did not save the day but worsened the situation. Parameters  $\bar{g}$ ,  $g_{\bar{s}}e$ ,  $\alpha$ ,  $\beta$ ,  $n$ ,  $m$  and  $i^*$  defined

optimal policies  $\varphi$  and  $\pi$  necessary for societal stability and the survival of regimes. They had to be considered as conditions to be respected by the incumbents. Governments were well advised to follow the rules, implementation was not her problem, Poloika concluded humbly again.

## **V. The real world – curse and blessing**

### *A. Instability, adaptation and change*

The Committee applauded. It seemed almost impossible to contradict. Some nerds of the Committee took the opportunity to question details of her lecture. Doubts were raised about the paradigm and the scientific value of the reasoning. Whereas the plausibility of the stability function and the indicator W/R were acknowledged by the Committee, the notion of  $r$ , the Nash-Rousseau coefficient, was questioned. Poloika relegated to philosophical discussion about social discourse and zeitgeist. She agreed to the argument that the formation of zeitgeist determined the notion of the populace towards the preferred and optimized wealth-freedom balance. This notion, however, became political relevant only by the assertiveness of collective action, an eminent part of political analysis she intended to deal with explicitly in her model as next steps for improvement of her analysis. Also, the focus of her presentation on equilibria induced more questions about enlarged models. Poloika pointed to the work of some colleagues (Salhi 2012, Roessler 2020). Fortunately, the chairperson did not allow for querulousness being anxious to present the golden rule of policy making to the king.

The king was awestruck. We have a rule, a golden rule even, he shouted with glee. Solovia will be safe from now to eternity. Solovia will no longer be governed by me, the king, but will perform according to algorithms. As an economist by training, he was positive about the empirical calibration of the model and tests of the value of parameters, a potent administration would ensure proper

implementation of what artificial intelligence told. Certainly, the model on which the golden rules were built on had to be refined. More complicated algorithms did not seem to be too hard to be defined. Solovia was well-known for excellent universities and superb scientists. Without any doubt, economists were exceptionally apt to enlarge and to widen Poloikas's workhorse model. Pure and simple economics of Poloika's approach could be redesigned to give way to models able to check stability properties and rules of adaption in mixed-up nations and different regimes. Political science, on the other hand, had already delivered plenty of informative narratives, anecdotal evidence, knowledge and smart intelligence on the search for stability between proper order, tyranny and failed state. The king remembered vividly the work of Fukuyama (Fukuyama 2000). And regarding political economics, the oeuvre of Acemoglu/Robinson had enriched our analytical and empirical knowledge with what they precisely (well, Poloikas road to  $r$  and the significance of  $g_{se}$ ) had coined the "narrow corridor" to liberty (Acemoglu/Robinson 2019). Having been swept away by those prospects the King declared the contest closed at the drop of a hat and Poloika was proclaimed the winner. An award ceremony was prepared. The king himself presided. His laudation concentrated on his hopes for algorithms to be developed and calibrated to a more sophisticated version of the golden rule. He then presented the reward of the contest offering Poloika to marry in the royal family. After a short moment of silence, Poloika asserted that she did not intend to marry anyone of the king's sons or daughters. She did not want to become royal herself because she believed in love and not in feudal regimes, not to speak about autocracies or hybrid systems. And she had good reasons for her skepticism which was based on her scientific work as presented to the Committee. Politely she referred to the king's speech and his enthusiasm for algorithms. With all respect, she said, the laudation missed the point.

### *B. History – a never ending story*

The golden rule cannot be looked at as a once-and-for-all algorithm. At best it could serve as a guideline for policy makers, a benchmark for governance, a blueprint for policymakers. It reminded policy makers to respect scarcities of resources as signaled by markets and corrected for external effects, as well as freedom of people to choose according to their individual preferences. She had just modeled sound and well-known paradigms. To avoid slow decay or sudden death of their regime incumbents had to listen to their populace and to renew the social contract continuously and peacefully. Societal search to follow the principles of the golden rule consisted of allowing for cooperative competition among different views on the pursuit of happiness, respecting the meaning of the social contract and the search for the best way to foster new technologies and to improve education. All of this was embraced by the parameters of the golden rule and its simple, but intricate algorithm. Feudalism, autocracies and hybrid systems were ill-prepared to cope with the complicated task of listening to their populace and the competitive search for the best answer. The ideological foundation of those regimes and their lack of adequate incentives to prevent power-based responses destabilized societies not only in the short run. As for herself as a scientist, Poloika wished to work on the stability properties of a fully-fledged model calibrated to types of regime. The educated guess here acknowledged the historical process of growing wealth and lesser repression across societies and proposed a stability ranking from (lowest) autocracies to feudalism and hybrid systems up to democracies (highest) in our times. Having said that Poloika went back to her scientific work. Oiko Nomos was left behind somewhat contemplative. He did not doubt the fascination of pure economics but felt attracted by the art of modeling interdependencies between politics and economics. Certainly, political economics of Poloika's model had raised doubts about the future of his kingdom. Moreover, Poloika had not even

touched upon international relations. Neighboring countries might have their own interests concerning their links with Solovia. And what if  $g_{\bar{s}e}$  was negatively correlated with the growth of wealth? He decided not to think about it and convened the “National Committee on Political Change Research” again. This time the task was to set up a constitution for Solovia based on democratic principles. After having completed this mission the king resigned. Oiko Nomos looked forward with enthusiasm to improving his golf handicap.

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