

# **Covenant Persuasion lead to Constitutionalism – Neither Was Invented**

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## ABSTRACT

Constitutionalism is a conviction shared by people that a government must act in compliance with a dominant charter. So is covenantal persuasion. The covenant reflects statutes and traditions etched in a living covenantal practice. The practice cannot exist without the persuasion and the persuasion cannot exist without the practice. Elazar was one of the most prolific scholars of the covenantal model. There is one point where the paper diverges from Elazar. The paper discusses a mathematical model and other studies of the covenant practice demonstrating that such a practice involves a multitude of simultaneous vital conditions. That led to the understanding that the covenantal practice cannot be invented. Therefore all covenant practices and covenantal faiths evolved from a living parent covenantal practice. Constitutionalism followed the same path. American Constitutionalism evolved from the covenant practice of Puritan New England. The Constitution of "We the People" can limit the government because the faith of people that its words have the power to do so. The first covenant society was pre-monarchic Israel. Semi-nomads in the desert brought into the Holy Land their conviction that words and not kings shall govern. Miraculously, their practice included all the essential ingredients of a viable covenantal practice. Waldensians, Gascony's *vesiau*, Romanian *obște* and obviously Pilgrims and Puritans inherited their viable practices from one another. All of them have a common ancestor: Early Christianity.

## INTRODUCTION

Constitutionalism "is the name given to the trust which men repose in the power of words engrossed on parchment to keep a government in order." <sup>1</sup>

The Covenant of Israel is the oldest such parchment; it directed the Israelites to govern their alliance. Researchers studied other societies<sup>2</sup> ruled by such a "supreme customary justice"<sup>3</sup>, pact/compact<sup>4</sup>, system of commandments<sup>5</sup>.

"A covenant is the constitutionalization of a relationship."<sup>6</sup> The covenant matters as long as the people's persuasion and vigilance enforces the constitutional statutes of the covenant. Can someone propose a covenant changing previous practices and instituting new values? Some answer affirmatively claiming, for example, that Pierre Valdés founded the Waldensian sect at about 1170 in the Catholic and hierarchical city of Lyon<sup>7</sup>. The following section ("*Thesis*") mentions that Elazar, the most prolific scholar of the covenantal model, did not rule out that various oathbound alliances could be proper grounds for the emergence of covenantal formations.

The purpose of this paper is to substantiate that no one can decree and enforce a covenant having in mind to hop from a hierarchical practice to a newly conceived covenantal practice. Section "*An Acephalous Society with Retributive Justice*" explains that the covenantal model differs from other acephalous societal models because the covenant needs to be imposed by detection of deviation, judgment, attribution of guilt and subsequent punishment. Acephalous societies have no police; retributive justice requires community engagement controlling transgression. The section will discuss that this can be achieved by prohibition of work on the Sabbath<sup>8</sup>. How would the hypothetical founder arrive at that conclusion? Section "*Simulation Results*" discusses mathematical simulations and their results revealing additional institutions essential to the resilience of a covenantal society. Section "*Methodology*" details mathematical relations behind the simulations for readers questioning how mathematical manipulations can shed light on societal problems.

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<sup>1</sup> Walton H. Hamilton, "Constitutionalism". in Edwin R.A. Seligman, et al. (eds) *Encyclopedia of the Social Sciences* (New York: Macmillan 1931). p. 255.

<sup>2</sup>See also a recent volume of chapters dedicated to covenanted networks Joseph Livni, "Nomadism and the Sociological Seed of Pre-Monarchic Israel," in *A Civil Society with No Hierarchy*, ed. Ilie Bădescu and Joseph Livni (Lanham, MD: Lexington Books, in print).

<sup>3</sup> HH Stahl, "Nerej, Un Sat Dintr-O Regiune Arhaică," *Sociologie Românească, an IV* (1942)., cited by , Iancu Filipescu, "Din Contribuțiile Profesorului Henri H. Stahl La Dezvoltarea Sociologiei Istoriei," *Sociologie Românească* IV, no. 3 (2006).

<sup>4</sup> e. g. Jean Pierre Barraque, "Pactisme Et Pactismes," in *Mélanges En L'honneur Du Professeur Christian Desplat. Espaces Nationaux Et Identités Régionales*, ed. Adrián Blázquez Garbajosa and Philippe Chareyre (Ortez: Gascogne, 2004), Aero Mayflower Transit Co, and William Bradford, *The Mayflower Compact* (The Company, 1955).

<sup>5</sup> Émile Durkheim, *Moral Education* (Mineola, NY: Dover Publications, 2012), 31.

<sup>6</sup> Daniel J. Elazar, *Covenant and Polity in Biblical Israel: Volume 1, Biblical Foundations and Jewish Expressions: Covenant Tradition in Politics* (London and New York: Routledge, 2018), 24.

<sup>7</sup> e. g. Philippe Pouzet, "Les Origines Lyonnaises De La Secte Des Vaudois," *Revue d'histoire de l'Église de France* 22, no. 94 (1936): 11, Olivier Legendre, and Michel Rubellin, "Valdès: Un «Exemple» À Clairvaux? Le Plus Ancien Texte Sur Les Débuts Du Pauvre De Lyon," *Revue Mabillon* 11 (2000): 189.

<sup>8</sup> In a hierarchical world the Sabbath is sometimes a day of rest: one is allowed to refuse to work; in the covenantal world work is prohibited on the Sabbath: one is obliged to refuse work.

## THESIS

### *Review of Covenantal Model*

As Elazar teaches in a covenantal societal model “equal individuals or individual entities join together through a covenant or political compact as equals to unite and establish common governing institutions”<sup>9</sup>.

This work disputes Elazar’s contention that “it is possible that covenant ideas emerged spontaneously in various parts of the world.”<sup>10</sup>; Elazar lists examples of other oath-bound societies, such as Scandinavian, Bedouin, Native American and Hungarian cultures, suggesting that the covenantal model had multiple opportunities to emerge. True, nomadic tribes did possess an “oath institution” and some of them were even acephalous<sup>11</sup>. However, they did not practice the covenantal justice model as defined by Elazar himself:

... a proper covenant not only offers humans the right path or way but provides means for the self-same humans to judge and be judged as to how well they stay on that path or maintain that way.<sup>12</sup>

Results of mathematical simulations (see section “*Simulation Results*”) show that a successful covenantal model requires additional institutions such as periodic assemblies, combatting poverty, covenantal education and values. Reasonably, even the appearance of one acephalous society simultaneously possessing such institutions and traditions is not easy to envision. Consequently, the explanation of the later appearance of other covenanted communities consists of successful copying previous functioning covenantal models.

### *Justice Administration of Acephalous Societies*

Boehm “made the case that egalitarian behavior arises from dislike of being dominated”<sup>13</sup>. He studies societies opposed to dominance nurtured by an *egalitarian ethos*<sup>14</sup>; he describes the societal type as a *reverse dominance society*; the opposition to dominance brings to surface the “first meaning of freedom”<sup>15</sup> which is participation of all people in government. Boehm’s term of *reverse dominance hierarchy* makes sense because instead of coercing the behavior of individuals, the egalitarian ethos twists the arms of the chief or the big man. This also implies that *liberty* has many meanings and this article uses the term *liberty* in the above context of *political freedom*.

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<sup>9</sup> Daniel J. Elazar, *Covenant & Constitutionalism: The Great Frontier and the Matrix of Federal Democracy* (New Brunswick, NJ: Transaction Publishers, 1997), Introduction

<sup>10</sup> Elazar, *Covenant and Polity in Biblical Israel: Volume 1, Biblical Foundations and Jewish Expressions: Covenant Tradition in Politics*, 24.

<sup>11</sup> See more in Livni, in *A Civil Society with No Hierarchy*.

<sup>12</sup> Daniel J. Elazar, "Introduction," in *Covenant & Commonwealth: From Christian Separation through the Protestant Reformation, the Covenant Tradition in Politics, Vol. 2*, ed. Daniel J. Elazar (<https://www.jcpa.org/dje/books/ct-vol2-int.htm>, 1996).

<sup>13</sup> Christopher Boehm et al., "Egalitarian Behavior and Reverse Dominance Hierarchy [and Comments and Reply]," *Current Anthropology* 34, no. 3 (1993).

<sup>14</sup> Boehm and others refer to this opposition also as *egalitarian ethos*, e. g. Boehm et al, Avraham Faust, *Israel's Ethnogenesis: Settlement, Interaction, Expansion and Resistance* (London: Equinox Pub., 2006).

<sup>15</sup> Friedrich A. Hayek, *The Constitution of Liberty* (Chicago: University of Chicago Press, 1978), 13.

Social life imposes a compromise between absolute freedom and acceptance of norms of behavior. According to ancient Jewish sages three values govern this compromise: *justice, truth and peace*<sup>16</sup>. In modern times Adam Smith similarly identifies three essential functions of government<sup>17</sup>. Justice is indisputably a criterion for an individual to accept limits on the “circumstances in his environment with which others cannot interfere”<sup>18</sup>. Acephalous societies employ restorative justice; accordingly the offense is declared by the injured party and not by a code that determines what an infraction is. The justice is mostly achieved by mediation which in some cases is preceded<sup>19</sup> by a cycle of retaliations.

Hierarchies employ retributive justice. The rulers assume powers to decree rules, judge cases and punish the guilty. Table 1 reviews the differences between the two justice models<sup>20</sup>.

**Table 1 – Comparison between retributive and restorative justice**

	Justice type	
	Retributive	Restorative
Predetermined rules of behavior	✓	
Attribution of guilt	✓	-
Punishment	✓	-
Shared values between offender and victim	-	✓
Empathy with offender	-	✓
Proven in egalitarian chiefdom	-	✓
Proven in civilized complex society	✓	-

### *An Acephalous Society with Retributive Justice*

The covenantal society is acephalous; however its justice administration is retributive. Its laws have been derived from a covenant. Since there is no ruler with legislative authority the legislating authority is the divinity. Detection of deviation is the responsibility of the community; so is correction. A collection of investigations points out the modus operandi of various known covenantal societies<sup>21</sup>. This work discusses the mathematical unfeasibility of inventing such a society.

<sup>16</sup>Mishnah, Chapters of the Fathers a.k.a. Pirkey avot 1:18

<sup>17</sup> defense, justice administration and public works Philip A. Klein, *Beyond Dissent: Essays in Institutional Economics* (Armonk, NY: M.E. Sharpe, 1994), 22.

<sup>18</sup> Hayek, 13.

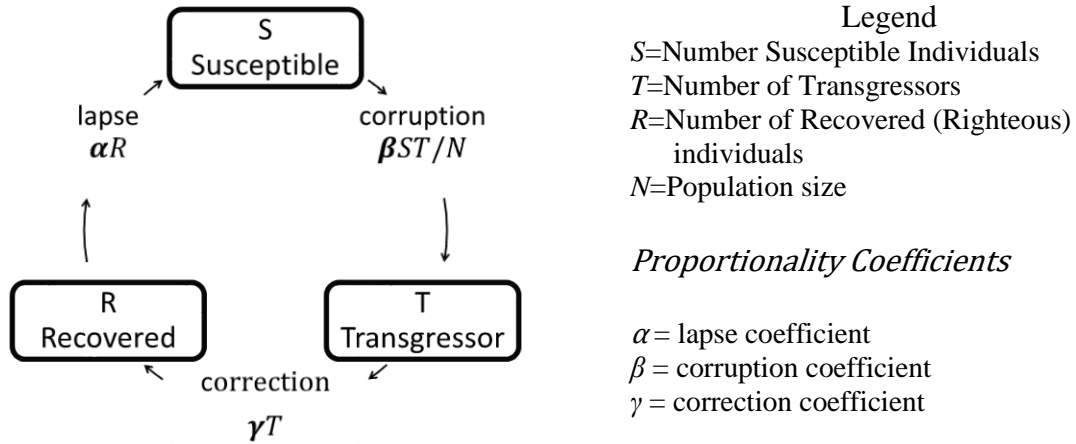
<sup>19</sup> For example the Longhouse Justice System solved grievance by mediation between perpetrator and victim, through an arbitration “and resolution of the harm caused by an offence rather than determining guilt and punishing an offender” Elizabeth Jane Dickson-Gilmore, “Resurrecting the Peace: Separate Justice and the Invention of Legal Tradition in the Kahnawake Mohawk Nation” (London School of Economics and Political Science (United Kingdom), 1996), 169.

<sup>20</sup> A detailed comparison between the two models is given by Michael Wenzel et al., "Retributive and Restorative Justice," *Law and human behavior* 32, no. 5 (2008).

<sup>21</sup> Ilie Bădescu, and Joseph Livni eds., *A Civil Society with No Hierarchy* (Lanham, MD: Lexington Books, in print).

## The retributive justice model

Complex societies employ retributive justice for crime control. The system consists of law, detection of deviation from the law, judgement and corrective action (Figure 1).



**Figure 1 – Susceptible individuals become transgressors; the number of new transgressors is proportional to  $S$  and  $T$ . Similarly corrective action by retributive justice removes transgressors from the population and they enter the R category; the increment in R is proportional to  $T$ . A proportion  $\alpha R$  of the R category lapse into the S category.**

Figure 1 suggests that the efficiency of the system may be mathematically investigated by the SIRS model. The SIRS model has been developed and used in epidemiology studies<sup>22</sup>; however its use in law enforcement is not new<sup>23</sup>. Figure 1 and Table 2 illustrate the analogy justifying the use of the Kermack-McKendrick<sup>24</sup> SIRS model<sup>25</sup>.

<sup>22</sup> e. g. Rami Yaari et al., "Modelling Seasonal Influenza: The Role of Weather and Punctuated Antigenic Drift," *Journal of The Royal Society Interface* 10, no. 84 (2013).

<sup>23</sup> e.g. Haiyun Zhao, Zhilan Feng, and Carlos Castillo-Chavez, "The Dynamics of Poverty and Crime," MTBI-02-08M (2002).

<sup>24</sup> William O Kermack, and Anderson G McKendrick, *A Contribution to the Mathematical Theory of Epidemics*, vol. 115, *Proceedings of the Royal Society of London A: mathematical, physical and engineering sciences* (The Royal Society, 1927).

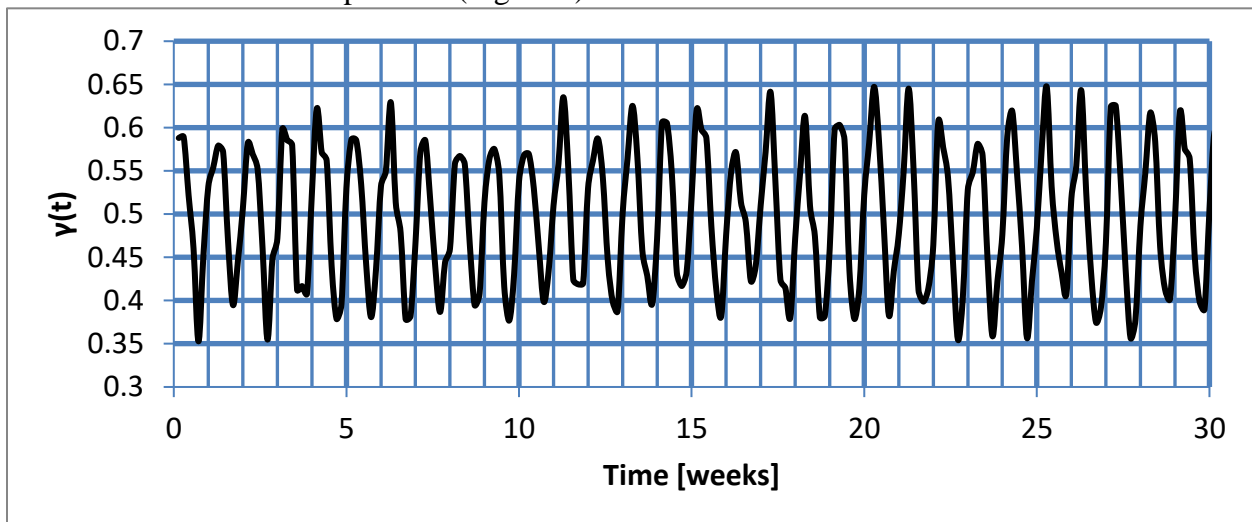
<sup>25</sup> e. g. L.J.S. Allen et al., *Mathematical Epidemiology* (Springer Berlin Heidelberg, 2008), 75.

**Table 2 – Rationale for using the SIRS model for studying crime control; as long as crime pays transgression is contagious; transgressors become righteous due to punishment of concern over punishment**

	<b>Crime Control</b>	<b>Epidemiology</b>
<b>Categories</b>	S-Susceptible, T-Transgressor, R-Righteous	S-Susceptible, I-Infected, R-Recovered (Immune)
<i>Coefficients</i>	Corruption, Repentance, Lapse	Infection, Recovery, Loss of Immunity
<i>Contagion</i>	Corruption	Infection
<i>Contagion rationale</i>	Crime pays	Virus (bacteria) transmission
<i>Contagion rate</i>	Proportional to S and T	Proportional to S and I

### The covenantal periodic correction

The model reveals the most obvious difficulty of the covenantal society. In a hierarchic society the law enforcement works continuously. The correction coefficient  $\gamma$  may be adjusted to recover more criminals than the corruption  $\beta$  coefficient generates ( $\gamma > \beta$ ). In a covenantal society the correction function is periodic (Figure 2).



**Figure 2 – Correction coefficient  $\gamma(t)$  as function of time; the oscillating correction is a result of constant watching one’s neighbor, minding his business, detecting and rebuking transgression and peer-pressure peaking at the weekly assembly;**

The correction of evildoers is a result of peer pressure, interference in other people business, continuous vigilance, rebuking transgressors, public denouncement, and punishments in the form of banishment and excommunication<sup>26</sup>. Ideally the correction recovers 100% of transgressors during each period. Practically this means that  $\gamma$  is less than 1/week. A corruption coefficient of  $\beta < 1/\text{week}$  cannot be ruled out. For example Livni showed that the analysis of archaeological evidence of pig remains from pre-monarchic Israel indicates transgression free

<sup>26</sup> See more see more in Bădescu, and Livni eds. the almost identical pattern of correction by peer pressure in Roman Palestine, Romanian obște, Jewish medieval diaspora, American puritans etc.

communities on the Highlands of Judea and Samaria<sup>27</sup>. This can only be achieved if  $\beta < 1$ , (see section “*Simulation Results*”).

On the other hand  $\beta$  the corruption factor is not periodic and it grows with the benefits of transgression. For example Livni and Stone<sup>28</sup> calculated that a study of drug addiction<sup>29</sup> implies a corruption rate of 1.5/week. If the corruption rate in a covenantal community reached comparable levels then the community couldn't become transgressor free (see more in section “*Simulation Results*”).

The periodic nature of the correction function is a principal reason why *one cannot invent a covenantal society*. The most efficient correction coefficient is 1/period. One cannot prohibit work every day. Thus the interval between assemblies must exceed one day. The next natural period is half a month (the interval between new moon and full moon). Only work prohibition can assure full participation at the assembly. The half-month period would reduce the efficiency of correction to about 1/2 /week. Such a correction rate is disastrous. No hypothetical founder would guess that the vital assembly period is about one week. The week entered civilization in pre-monarchic Israel<sup>30</sup>. The seven days week was adopted by Christianity and by Islam from Judaism. Early Christianity followed the covenantal model; it inherited the correction procedures from Roman Palestine including the weekly assemblies. Livni's monograph of 2021 offers a genealogic chart from pre-monarchic Israel to the American Puritans<sup>31</sup>.

### *Simulation Results*

Crime-free societies are the exception not the rule. Societies can survive with endemic transgression. In general societies can live with a tolerable level of transgression<sup>32</sup>; covenantal communities are not an exception. How does the covenantal society control the level of endemic transgression when it cannot assure the condition  $\gamma > \beta$  for transgression-free community?

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<sup>27</sup> Joseph Livni, *The Biblical Roots of American Constitutionalism - from 'I Am the Lord' to 'We the People'* (Lanham, MD: Lexington Books, 2021), 35-41.

<sup>28</sup> Joseph Livni, and Lewi Stone, "The Stabilizing Role of the Sabbath in Pre-Monarchic Israel: A Mathematical Model," *Journal of biological physics* 41 (2015), <https://dx.doi.org/https://doi.org/10.1007/s10867-014-9373-9>.

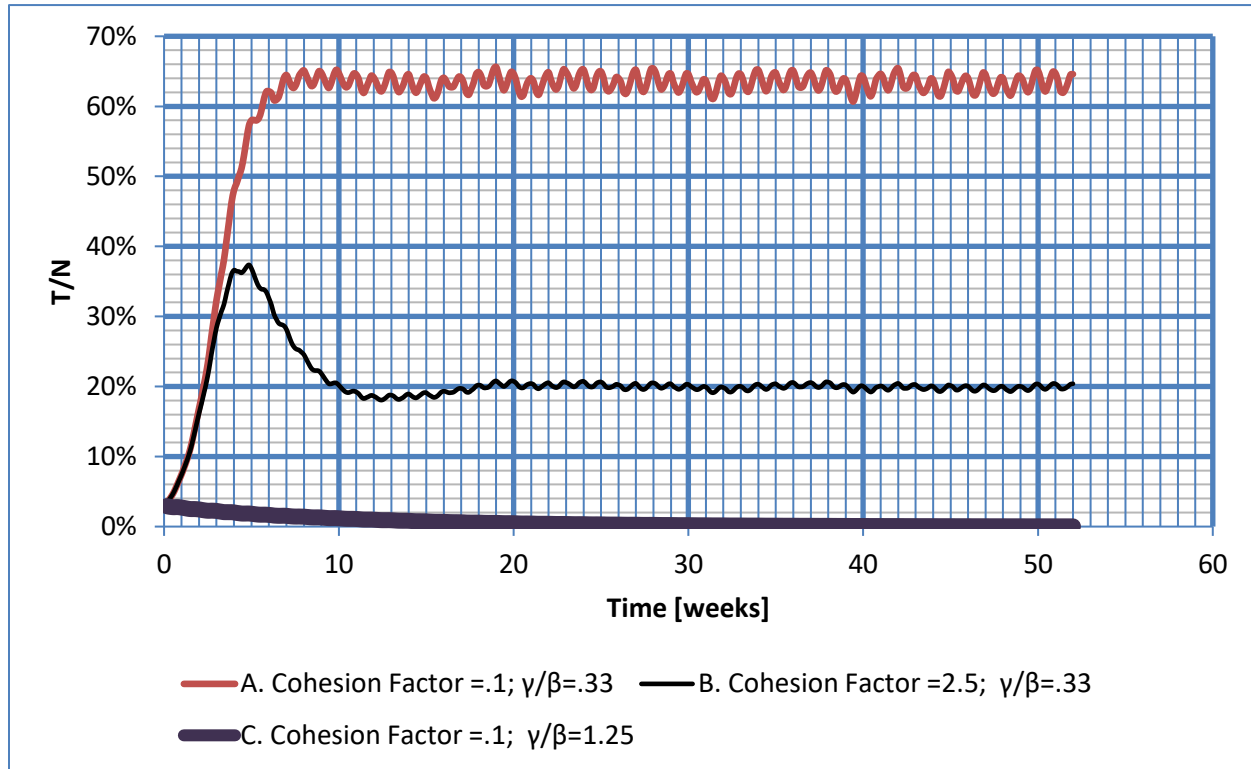
<sup>29</sup> Carla Rossi, "The Role of Dynamic Modelling in Drug Abuse Epidemiology," *Bulletin on Narcotics* LIV, no. 1 and 2 (2002).

<sup>30</sup> Some sources claim that the seven-day week is of Mesopotamian origin (James.E. Smith, *Biblical Protology* (Raleigh, NC: Lulu.com, 2007), 176, Robert Wilson, *Astronomy through the Ages: The Story of the Human Attempt to Understand the Universe* (Boca Raton, FL: CRC Press, 2003), 7. This is atypical of Babylonian computing because they considered seven to be an irregular number (Neugebauer 1969, 33). Other sources also argue that “there is no evidence that an actual seven-day cycle ever existed in ancient Mesopotamia” Eviatar Zerubavel, *The Seven Day Circle: The History and Meaning of the Week* (Chicago: University of Chicago Press, 1989), 14..

<sup>31</sup> Livni, 102.

<sup>32</sup> The amount of criminality a society can tolerate depends on its complexity see Joseph Livni, "Investigation of Collapse of Complex Socio-Political Systems Using Classical Stability Theory," *Physica A: Statistical Mechanics and its Applications* 524 (2019).





**Figure 3 – Results of 3 simulations:**

- A. -  $\gamma < \beta$  and weak cohesion factor; the outcome is a hazardous endemic transgression ;**
- B. -  $\gamma < \beta$  and strong cohesion factor; the the outcome is a tolerable endemic transgression;**
- C. -  $\gamma > \beta$ ; the outcome is a transgression free equilibrium.**

The simulation results indicate that for low corruption coefficients ( $\beta < 1/\text{week}$ ) a transgression-free community is reached (Curve C of Figure 3). In pre-monarchic Israel this was the case for transgressions like pork consumption<sup>33</sup>, idolatry, or using imported pottery<sup>34</sup>. Nevertheless, one cannot rule out that the corruption coefficient exceeds the rate of 1/week. The community has little impact on the corruption coefficient. Therefore simulations of cases A. and B. (Figure 3) represent conceivable situations. The comparison between curve A. and curve B. illustrates that the governing magnitude controlling the level of endemic transgression is the cohesion factor  $\gamma/\alpha$ . The higher the cohesion factor is the lower the endemic transgression will be at steady state. The community can do little about increasing the correction rate  $\gamma$ ; however covenantal communities had various measures and institutions to reduce the lapse coefficient  $\alpha$  to obtain higher values for  $\gamma/\alpha$ .  $\alpha$  symbolizes the rate of lapse from the recovered (righteous, immune) category to susceptible category.

The essential institutions are:

<sup>33</sup> Livni, *The Biblical Roots of American Constitutionalism - from 'I Am the Lord' to 'We the People'*, 35-41.

<sup>34</sup> Archaeological excavations revealed very few shrines and deity statues Israel Finkelstein, and N.A. Silberman, *The Bible Unearthed: Archaeology's New Vision of Ancient Israel and the Origin of Sacred Texts* (Simon & Shuster, 2002), 109, Faust, 62.

1. Trust in the supremacy of the Covenant<sup>35</sup>. “These commandments that I give you today are to be on your hearts” (Deuteronomy 6:6). This conviction enables anyone’s participation in the public affairs of the community. Thus, the assembly government may assume responsibility for combatting transgression and collective resistance to temptation. In other words, the whole community collectively struggles to reduce lapse of righteous into susceptible category.
2. Education<sup>36</sup> - “[Y]ou must teach them [the commandments] to your children” (Deuteronomy 6:7) - Covenantal education imparts covenantal values of equality in the eyes of the Lord, rule of covenant, Sabbath, respect for elders, for tradition etc.
3. Charity<sup>37</sup> - Extreme poverty is an obvious cause of loss of immunity triggering transitions from righteous to susceptible category.

One cannot rule out hierarchic societies with charity institutions. At the same time one *can* rule out a covenantal society without one. Moreover, assembly government is not compatible with hierarchic societies. In a covenanted community, parents and teachers teach not only by example and instruction, but also by daily practice embodying the mentioned covenantal values. Reasonably, a hypothetical founder of a covenantal society grew up with values often contradicting covenantal values. For example the supremacy of the covenant conflicts with the hierarchical value of obedience to higher ranks of State or Church. The hypothetical founder of a covenantal organization has to reeducate himself/herself to new and strange values; he/she also needs to guess which institutions are vital for the prospective society. As shown earlier, if the imaginary inventor misses one of these institutions then the first trial of the invented society will end in disaster as a matter of less than 10 weeks (curve A. of Figure 3).

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<sup>35</sup> e.g. "The Biblical covenant was a unique feature of Puritanism and in its highly developed form it became a cornerstone for its model community" Peter Mazzacano, "From Covenant to Compact to Contract: The Legal Transplantation of Puritan Jurisprudence to America," in *A Civil Society with No Hierarchy*, ed. Ilie Bădescu and Joseph Livni (Lanham, MD: Lexington Books, in print), "The Covenant of God to his people irradiates the entire Jewish history" Mădălina Măndiță, "The Covenant as Ideal Type, a Sociological Study of a Covenanted Community Model," in *A Civil Society with No Hierarchy*, ed. Ilie Bădescu and Joseph Livni (Lanham, MD: Lexington Books, in print), "...for that human will to be thrust in a moral direction, humans had to covenant and compact with one another to specify that the liberty they sought in the New World would be federal liberty" Elazar, *Covenant & Constitutionalism: The Great Frontier and the Matrix of Federal Democracy*, "a package of the rules acknowledged by all" Ilie Bădescu, "Communal Society and the Societal "Dual System" - Equality and Inequality in Carpathian Valleys," in *A Civil Society with No Hierarchy*, ed. Ilie Bădescu and Joseph Livni (Lanham, MD: Lexington Books, in print).

<sup>36</sup> Zeev Safrai, "Power Structure within Autonomy in Roman Palestine," in *A Civil Society with No Hierarchy*, ed. Ilie Bădescu and Joseph Livni (Lanham, MD: Lexington Books, in print), Adela Șerban, "Romanian Traditional Society - Social Control and Social Order," in *A Civil Society with No Hierarchy*, ed. Ilie Bădescu and Joseph Livni (Lanham, MD: Lexington Books, in print).

<sup>37</sup> Safrai, in *A Civil Society with No Hierarchy*, Livni, "Jewish Communities of the Diaspora," in *A Civil Society with No Hierarchy*, Rachel Christ-Doane, "The Salem Witch Trials and the Decay of the Great Puritan Experiment " in *A Civil Society with No Hierarchy*, ed. Ilie Bădescu and Joseph Livni (Lanham, MD: Lexington Books, in print).

## METHODOLOGY

The STRS mathematical model consists of a system of three simultaneous equations:

$$\begin{cases} \frac{dS(t)}{dt} = \alpha R - \frac{\beta S(t)T(t)}{N} \\ \frac{dT(t)}{dt} = \frac{\beta S(t)T(t)}{N} - \gamma T(t) \\ \frac{dR(t)}{dt} = -\alpha R(t) + \gamma T(t) \end{cases} \quad (1)$$

$S(t)$ ,  $T(t)$ , and  $R(t)$  represent the number of susceptible individuals, transgressors and righteous individuals at a given time ( $t$ ) respectively. The terms  $\frac{dS(t)}{dt}$ ,  $\frac{dT(t)}{dt}$ ,  $\frac{dR(t)}{dt}$  represent the growth rate at time  $t$  of  $S$ ,  $T$ , and  $R$  respectively. Growth rate is the increment of a population in a time unit. In our simulation the time unit is *one week*.  $\alpha$ ,  $\beta$ , and  $\gamma$  represent the relapse coefficient, corruption coefficient, and repentance coefficient respectively.  $N$  symbolizes the population size. The coefficients and the growth rates are expressed in time units of weeks. For example  $\gamma$  expresses the proportion ratio of transgressors repenting in a week. The simulation calculates the number of transgressors at time  $t + \Delta t$  according to the formula  $T(t + \Delta t) = T(t) + \frac{dT(t)}{dt} \Delta t$ . For example if  $\Delta t$  is one day then  $T(t + 1/7) = T(t) + \frac{dT(t)}{dt} \frac{1}{7}$ . We substituted  $\Delta t = \frac{1}{7}$  because one day is one seventh of a week. In our simulation at time 0 there were 3 transgressors, and 97 susceptible individuals in a population of  $N = 100$ . Thus equation (2) predicts that the next day the number of transgressors will be  $T(0 + 1/7) = 3 + \frac{dT}{dt} \frac{1}{7} = 3 + \left( \frac{\beta \times 97 \times 3}{100} - \gamma \times 3 \right) \times \frac{1}{7}$ . Similarly one can calculate  $S(0 + 1/7)$  and  $R(0 + 1/7)$ . The simulation then follows the same procedure for times  $t + 2/7$ ,  $t + 3/7 \dots t + 365/7$ .

## CONCLUSION

A covenantal society cannot be conceived by an inventor because on its first day it requires:

1. A weekly assembly with full participation of the congregants;
2. Other institutions controlling evildoers:
  - a. an immediate respect of the commandments;
  - b. a constant vigilance detecting infractions and;
  - c. a functioning covenantal justice system.

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