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# The Pathways of Politogenesis and Models of the Early State Formation

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## ABSTRACT

*This article considers concrete manifestations of the politogenesis multilinearity and the variation of its forms; it analyzes the main causes that determined the politogenetic pathway of a given society. The respective factors include the polity's size, its ecological and social environment. The politogenesis should be never reduced to the only one evolutionary pathway leading to the statehood. The early state formation was only one of many versions of development of complex late archaic social systems. The author designates various complex non-state political systems as **early state analogues**. The early state analogue posed a real alternative to the state for a rather long period of time, whereas in many ecologically marginal regions they could compete quite seriously with the state sometimes until recently. Thus, it was only in the final count that the state became the leading form of political organization of complex societies. The very pathways to statehood had a few versions. One may group them into two main types: 'vertical' and 'horizontal'. Within the 'vertical' model the state formation took place in a direct way, i.e. directly from small pre-state polities to primitive statehood. Within the 'horizontal' model we first observe the formation of early state analogues that were quite comparable to the state as regards their complexity, whereas later those analogues were transformed into states.*

*This article is very closely connected with another article published in the same issue of this journal (Grinin and Korotayev 2009b).*

## INTRODUCTION

### General evolutionary approaches

As the present article is devoted to the study of rather general theoretical issues, I have to pay a considerable attention to the discussion of general macroevolutionary principles in order to comprehend adequately both the general course of politogenesis and the causes that make social systems 'choose' particular models of their development.

In the present article the **politogenesis** is defined as *a process of separation of the political dimension within a society and the formation of political subsystem as a relatively autonomous subsystem, a process of emergence of special power forms of social organization, which is connected with the concentration of power and (both external and internal) political activities and their monopolization by certain groups and strata*. In some of my publications (see below) I have tried to demonstrate that as an evolutionary process *politogenesis* is much wider than the *state formation process* (**SFP** throughout [on both terms for more details see Grinin and Korotayev 2009b in this issue]), because there were many versions of political development. Actually, politogenesis rarely followed the classical evolutionary scheme from pre-state society to primitive (early) state. Not only that for a long period of time one could observe a more frequent emergence not of early states, but of polities of a special type that were non-states with respect to the structure of their political administration, but that were comparable with the state as to many significant parameters. Such polities denoted by me as **early state analogues** or **ESA** (see e.g., Grinin 2002a, 2003, 2004b, 2007a, 2007b; Bondarenko, Grinin and Korotayev 2002, 2004) posed for a rather long time a serious alternative to the early state. There were many versions of development of the early state analogues. Some of them finally became states (note that the state analogues already had a rather high level of complexity when they were transformed into states), however, the research has also detected such pathways of sociopolitical evolution that did not lead to statehood (see e.g., Korotayev, Kradin and Lynsha 2000; Bondarenko and Korotayev 2000a; Grinin 2003; Grinin *et al.* 2004; Grinin 2007d, 2007e, 2007f).

Thus, the sociopolitical evolution of late archaic societies possessed an alternative: whereas these societies could evolve not only

in the direction of early state, they also could evolve through the development of complex *stateless* political forms. Yet a natural question appears at this point: which factors and causes did determine the 'choice' of a given evolutionary trajectory? Of course, there is no single determining factor; rather we always deal with a considerable number of causes and driving forces (on factors of social evolution see Grinin 2006b, 2007g, 2007h, 2007i; Grinin and Korotayev 2007, 2009a; Korotayev 1997b, 2003). It is quite clear that among those factors an important role is played by a social system's size that determines up to a considerable degree the volume of accumulated resources, the level of complexity of tasks that the respective social system has to solve, as well as its potential to react to the external challenges. This is one of the main themes of the present article.

As regards the *state formation process* (SFP) as such, the contemporary research demonstrates ever more clearly a very wide diversity of pathways to statehood, as well a very high variation of types of archaic states themselves (see *e.g.*, Claessen and Skalník 1978d, 1981; Godiner 1991; Feinman and Marcus 1998).

This confirms that macroevolution should not be compared with a wide staircase along which all the societies move in the same direction. It should be rather compared with an extremely complex labyrinth, whereas only a few are able to find their way out of it without borrowing from the others (Grinin 2007f; Grinin and Korotayev 2007, 2009a). Thus, any concrete society should not be regarded as a small-scale repetition of the general macroevolutionary development. Rather it is a unique combination of some general evolutionary and regional abstract traits on the one hand, and peculiar traits on the other. However, it is often very difficult to discern the general behind the peculiar. Moreover, macroevolution is not equal to rigidly programmed development; rather it is a movement in the context of continuous choice from among various alternatives and models (Grinin 2007c, 2007g). It should be emphasized that those models are not always in the exclusive opposition to each other; they are often integrated, intertwined; we observe extensive borrowing of innovations. This explains to a considerable extent why state analogues could be transformed into states and why, on the contrary, early states were transformed, though less frequently, into state analogues (see *e.g.*, Korotayev 2000a: 224–302; Trepanov 1995: 144–151; Leach 1970; Skalník 1991).

In another article published in this issue (Grinin and Korotayev 2009b) we use the notion of **social aromorphoses** as *the most important (but, consequently, very rare) qualitative macrochanges that increase significantly complexity, adaptability and mutual influence of social systems and open subsequently new directions of development for many societies* (see Grinin and Korotayev 2007, 2009a; Grinin, Markov and Korotayev 2008 for more details). We have singled out two – *Lower* (or Elder) and *Upper* (or Junior) aromorphoses connected with the politogenesis: (1) the formation of first medium-complexity polities (simple chiefdoms and their analogues), (2) the formation of first highly complex polities (early states and their analogues) (Grinin and Korotayev 2009b). In this article I have concentrated on the Upper aromorphosis. Note, however, that throughout most of the human history an evolutionary breakthrough toward a qualitatively new level of sociocultural complexity (*i.e.* aromorphosis) in one place (society) could only take place at the expense of destruction and stagnation of many other societies. This was denoted by us as the *rule of payment for aromorphic progress* (Grinin, Markov and Korotayev 2008).

I shall discuss below a number of other general evolutionary conclusions that I arrived at either independently, or in collaboration with Andrey Korotayev (see Grinin and Korotayev 2007, 2009a for more details; see also Grinin, Markov and Korotayev 2008). I believe that they have a considerable methodological significance and are directly relevant for the issues discussed in the present article:

a) transitions to social aromorphoses could only take place in conditions of a large diversity of institutions and forms of social systems, as a result of which various versions of social phenomena that have been produced by previous aromorphoses occupy all the accessible niches and apply all the possible versions of narrow specialization;

b) transitions to new aromorphoses are only possible in case of sufficiently wide general movement toward the growth of organizational complexity, the increase in the density of internal links (including positive feedbacks) – that is, the general evolutionary development of social systems (that, however, in each case acquires its specific form);

c) because of this, for any level of overall sociocultural complexity one can detect a considerable number of alternatives of so-

cial development; on the one hand, it makes sense to consider them as equally significant versions of social development, and, on the other hand, as a bunch of evolutionary pathways, as a probability (evolutionary) field, within which, however, theoretically, one may detect ‘main tracks’ and ‘collateral’ development lines;

d) for a long period of time those developmental pathways co-existed and competed with each other, whereas for many special ecological and social niches the ‘collateral’ (in retrospective) pathways, models, and versions could well have turned out to be more competitive and adequate;

e) statements on ‘inevitable’ evolutionary results usually turn out to be correct in the most general count only: as a result of a long competition of various forms, their destruction, transformation, social selection, adaptation to multifarious ecological environments etc. However, for a particular society such a result could well have not been inevitable at all.

### **Target setting and definitions**

The early state can only develop within a society with a certain level of overall sociocultural and political complexity, within a society that has a sufficient volume of surplus and population (see *e.g.*, Claessen and Skalník 1978c; Claessen 1978, 2000, 2002). However, even within such social systems the state did not appear in many cases, it only emerged in particular, quite special circumstances (that we shall discuss later). The other complex societies – **the early state analogues** – having reached this level of complexity did not form states, but developed along their own alternative trajectories. In the present article I have undertaken an attempt to consider systematically the main types of the state analogues and to provide an explanation why these were such complex stateless forms that were more prevalent than early states during quite a long period of time<sup>1</sup>.

In the framework of the present article we define **the early state analogue** as *a category that is used to designate various forms of complex stateless societies that are comparable to early states (however, usually they do not surpass the level of typical early states) with respect to their sizes, sociocultural and/or political complexity, functional differentiation and the scale of tasks they have to accomplish, but that lack at least one of the necessary features of the early state listed in its definition.*

We define the **early state** as a *category that is used to designate a special form of political organization of a relatively large and complex agrarian society (or a group of societies/territories) that determines its external policy and partly its social order; it is a power organization (a) that possesses supremacy and sovereignty (or, at least, autonomy); b) that is able to coerce the ruled to fulfill its demands; to alter important relationships and to introduce new norms, as well as to redistribute resources; c) that is based (entirely or mostly) on such principles that are different from the kinship ones* (see Grinin 2007e for the justification of this definition; see also Grinin 2008; Grinin and Korotayev 2006, 2009a)<sup>2</sup>.

Thus, I regard the early state as a special political form of society (and not as a special type of society as a whole). But any form needs certain 'contents'. In general those 'contents' are represented by the society in its certain condition, and in a more narrow sense 'these contents' may be regarded as objective parameters and characteristics of a certain society (see below for more details on this point). Such objective conditions themselves do not imply that the respective society would inevitably form a state; however, the transition to statehood turns out to be impossible if those conditions are not satisfied. Consequently, it appears impossible to consider conditions of state formation not taking into account quantitative and qualitative characteristics of a society, within which the respective processes take place. These objective conditions include first of all a society's size, environmental conditions, contact intensity within a society, as well as between societies.

In the present article a **society's size** means first of all its population's size. Of course, the correlation between societal size and polity type is far from being perfect; however, we shall try to demonstrate that after societal size reaches a certain limit, the development toward statehood becomes more and more probable, otherwise the respective polity splits or degenerates (see Grinin 2007g, 2007j).

The possible pathways toward the early statehood proper are also rather diverse (see *e.g.*, Grinin 2004a). In the framework of my theory within the present article I single out two main models of the SFP: 'vertical' and 'horizontal'. Within the 'vertical' model the state formation occurs directly, that is, small pre-state polities are transformed directly into primitive states. Within the 'horizon-

tal' model, we observe first the formation of early state analogues, and this is only later when those analogues are transformed into states.

## EARLY STATE ANALOGUES

### General considerations

I have proposed to label those polities that have such a level of sociocultural and/or political complexity which is comparable to the one of early states as *early state analogues* (ESA) due to the following reasons:

1. In comparison with truly pre-state polities (such as big men collectivities, simple chiefdoms and tribes, independent simple communities etc.), ESA were not just larger, they were also significantly more complex. For example, the largest Hawaiian complex chiefdom had population of not less than 100 000, whereas a typical simple chiefdom in the Trobriand Islands had population of just 1 000 (Johnson and Earle 2000: 267–279, 285, 291).

2. In the meantime the ESA sizes and complexity levels were quite comparable to the ones of the early states; on the other hand, they often competed quite successfully with early states<sup>3</sup>.

3. Both political structures supported the fulfillment of functions of analogous complexity (see *e.g.*, Grinin 2003, 2007f), in particular:

- establishment of a necessary level of political and ideological unity and solidarity within a growing society (a group of closely related societies) in order to solve common problems;

- provision of external security as well as conditions for expansion of a substantially large social system (with population in dozens, and sometimes even hundreds of thousands);

- support of social order and redistribution of both necessary product and surplus in conditions of a substantial level of development of social stratification and functional differentiation, and the growing complexity of problems facing the given social system;

- securing of a necessary level of the societal governing, including the norm creation and justice, as well as the fulfillment by population of necessary duties (military, material, labour etc.);

- creation of conditions for economic reproduction (especially where a coordination of common efforts was needed).

4. Early states and their analogues had an essentially similar level of complexity, as they differed in this respect from all

the pre-state polities. One may mention the following features of similarity between the early states and their analogues: their formation involves the increase in number of levels of complexity as regards the societal organization and administration, a substantial change of traditions and institutions connected with the regulation of sociopolitical life, a radical increase in functional differentiation, division of society in two or more strata that differ with respect to their (formal and/or informal) rights, duties, and functions<sup>4</sup>; formation of ideology that justify and legitimize those sociopolitical changes<sup>5</sup>.

5. Consequently, early states differ from their analogues not so much by their complexity and sizes, but rather by certain peculiarities of their political structure and administration techniques; and – historically – by the point that early states at the moment of their formation had a certain combination of special conditions that were favourable for the state formation, whereas the analogues did not have them (see Grinin 2004b, 2007d, 2007f; Korotayev 1995b, 1997a, 2000a, 2000b, 2006; Korotayev, Kradin and Lynsha 2000 for more details)<sup>6</sup>.

The forms of analogues were very diverse (see Grinin 2003, 2004b, 2007f) and the unification under the one name – **early state analogues** – of a few rather different types of polities is done in order to contrast them with the state alternative of political evolution of complex late archaic societies.

My analysis has demonstrated that the early state analogues' formation was not an exception. What is more – it was the early state formation that was a rather rare politogenetic event for a rather long period of time (see Grinin 2001, 2007e, 2007f). **The state form only became a typical and leading form of political organization of complex societies as a result of long evolutionary selection, whereas the other forms (that for a long time were alternative to the state) were finally either transformed into states, or disappeared, or turned into collateral or dead-end types of sociopolitical organization.**

The developmental pathways of analogues were rather different. Some of them turned out to be incapable to transform into states by their very nature, some of them did not transform into states because their politogenesis was violently interrupted (as this happened with respect to the Iroquois, Tuareg, Xiongnu, Gaul etc.). Still

many analogues got transformed into states. However, this transformation took place after they had achieved a rather high level of complexity and development that was quite comparable with the level of complexity of many states. Some analogues were transformed into states when they had population of 10 000–15 000, some other did this when they had population in many dozens of thousands, still others did this when they had population in hundreds of thousands (see: Grinin 2003, 2004b, 2006c, 2007e). This point has led me to the following idea (Grinin 2003, 2004b, 2007f): the transition to statehood in different societies actually took place not from the same level of complexity, but from different levels of sociocultural and political complexity, as a society having reached such sizes and complexity levels, from which the transition to statehood is possible in principle, may have continued developing along its own trajectory (that sometimes did not lead to statehood at all). In other words, some analogous polities before they transformed into states had made one more transformation (or even two more transformations) turning into an even larger and more complex analogue (Scythians and Hawaiians could serve here as an example). Thus, within the politogenesis one can observe evolutionary alternatives at any level of the early state complexity.

The main interval within the early state analogues are found may be identified as being between 15 000 and 70 000 people. However, there were a number of analogues with population smaller than 15 000 while some analogues' population far exceeded 70 000. Accordingly, the structure of any early state analogues was rather complex. Naturally, early states were generally larger than their analogues, because the developmental potential of the states was much higher (and, consequently, they had a higher ability to increase their sizes). However, at early phases of the state formation process (while the evolutionary advantages of the state were not manifested up to a considerable degree) the sizes of early states and their analogues were approximately equal.

### **Early state analogues: a classification**

As the main explanations of the proposed classification, all the examples with detailed comments (including the information on all the analogue polities mentioned below) have already been published by me in a number of publications, including articles in the *Social Evolution & History* (see *e.g.*, Grinin 2003, 2004b), here I have an opportunity to produce without many comments a short

classification that, however, takes into account those amendments that I have done after the publication of the above mentioned works (see in particular Grinin 2007f; Grinin and Korotayev 2009a).

I have identified the following types of analogues:

1. Some independent self-governing civil or civil-temple communities as well as self-governed territories (including the one formed as a result of colonization, like it happened in Iceland in the 10<sup>th</sup> – 13<sup>th</sup> centuries) with population ranging between several thousand and several dozens thousand.

2. Some large tribal alliances with a relatively strong power of a paramount leader (*rex* etc.) with population reaching dozens of thousands (sometimes even 100 000 and more). Some German tribal formations of the Great Migrations Epoch could serve here as an example.

3. Large tribal alliances and confederations, within which the ‘royal’ power was lacking (it was absent altogether or it was abolished), but at the same time the processes of social and wealth stratification as well as functional differentiation had brought significant results and even went faster than the processes of political centralization. Examples of such tribal alliances lacking the ‘royal’ power may be found among the Saxons of Saxony and among some Gaul peoples. The population united by such alliances could well reach dozens (and sometimes hundreds) of thousands people.

4. The quasi-state alliances of nomads that were large and strong militarily and may have looked like large states (*e.g.*, Scythia, or the Xiongnu ‘Empire’).

5. Many complex chiefdoms, especially the very large ones that were comparable with many early states with respect to their sizes and organizational sophistication (for example, the population of the Hawaiian chiefdoms was within the range between 30 000 and 100 000 [Johnson and Earle 2000: 246]).

6. Large and developed polities with indeterminate characteristics whose structure cannot be described precisely due to the lack of sufficient data; however, judging by what is known about them, they can be regarded neither as ‘pre-state polities’ nor as states. The Harappan civilization can serve here as a bright example (see *e.g.*, Possehl 1998; Lal 1984).

7. Some other, rather peculiar, forms of analogues. For example, one may suggest that some **secret societies** (like the ones known in Melanesia and some parts of Africa) might have grown up to the level of early state analogues, especially if they actually became a part of the power apparatus as was observed, for example, among the Mende and Temne in West Africa (Kubbel' 1988: 241). Among many African peoples such secret societies became that very structure from which the supreme sacral power developed (Kubbel' 1988: 241); this correlates quite well with the idea that the sacredness of royal power was directly connected with the application of force (see Skalník 1991: 145). One may find rather unusual forms of analogues. One of such forms was denoted by me as **corporate territorial** (see Grinin 2007f). Its most evident example is provided by the history of Asia Minor where in the early 2<sup>nd</sup> millennium BCE we observe the formation of a peculiar community of merchants with its center in the city of Kanish that had its peculiar constitution, organs of self-government, court, treasury, a chain of factories along the trading route connecting Mesopotamia with the Mediterranean and Aegean seas. This community was independent from any other political power and acted as an international entity (Giorgadze 1989; 2000: 113–114; Yankovskaya 1989: 181–182).

## **ANALYSIS OF INFLUENCE OF POLITY SIZE ON THE COURSE OF POLITOGENESIS**

### **General notes**

A general correlation has been detected: the more numerous the polity's population, the higher (*ceteris paribus*) the complexity of its organization, as the new 'volumes' of population and territory demand new levels of hierarchy and administration; on the other hand, new levels of hierarchy and administration increase the polity's capability to grow (see *e.g.*, Carneiro 1967, 1987; Feinman 1998; Johnson and Earle 2000: 2, 181; Johnson 1981, 1982, 1986; Rothman 2004: 100). The growth of a society's size led to the increase in its complexity and to the formation of new problems, as well as to a rapid growth of information volumes (Johnson 1978), the emergence of a new stratum of administrators and specialists without whom the polities lost their solidity (Johnson 1981; see also Claessen 2004). On the other hand, the growth of political

complexity helped a polity to grow in its size without disintegration (see first of all Carneiro 1967, 1987). As well it is important to remember that the societal size also depends on many other factors including the natural environment, accumulated ‘volume’ of political-cultural complexity, various political contingencies etc<sup>7</sup>.

Accordingly, this proves the following: a) a polity's type correlates with its size; b) evolutionary possibilities of development correlate with a polity's type and size; c) the probability of a polity's transformation in the direction of development and strengthening of statehood increases if it strives to avoid disintegration, to acquire a sufficient solidity and undertakes certain actions in order to achieve this. This could be seen in an especially clear way in the situation of a rapid growth of societal sizes as a result of a successful military unification or conquest. In those cases when the unifying force strives to establish a more solid and/or effective administration and exploitation of rapidly growing territory, it has to alter the administration form which leads inevitably to the change of political-administrative (legal, military, religious) institutions. A clear example is the Inca Empire whose territory increased in the second half of the 15<sup>th</sup> century by hundreds of times just in 30 years (see Haviland 1991: 245; Mason 1961) and whose rulers managed to reorganize the administration system of the whole empire.

### **The problem of sizes of the early state**

There is no common opinion about the size that is minimally necessary for the early state. According to different scholars the minimum population of the early state fluctuates from 2000–3000 to hundreds of thousands (see *e.g.*, Feinman 1998: 97–99 for more details). Such a vast span is accounted for up to a considerable degree by the fact that some scholars try to construct a slender unilinear scheme: from pre-state polities to states. For example, the population of the simple chiefdom should be in thousands, the one of the complex chiefdom should be in dozens of thousands, whereas the population of the state is supposed to be in hundreds of thousands or even millions (Johnson and Earle 2000: 246, 304; Vasil'ev 1983: 45). However, such approaches at the present-day level of the development of our field are not quite suitable for the study of the politogenesis in general, and early state formation in particular, as they do not take into account the early state analogues, whereas some stateless polities were larger and more com-

plex than many states. This is an unresolvable contradiction within the unilinear evolutionary scheme.

Some schemes (*e.g.*, Johnson and Earle 2000) entirely ignore states with population between several thousand and 100 000 that were rather numerous in the Ancient Age and the Middle Ages<sup>8</sup>. In addition to that, there are quite authoritative opinions that the primary states (Fried 1967) always and everywhere were small (see *e.g.*, Dyakonov 2000: 34). Southall (2000: 134, 135) maintains that the earliest states were city-states with small urban (or proto-urban) centers occupying 10 hectares or even less, which implies a rather small population (even if we add to a possible estimate the population of vicinities).

The problem of the minimum of a polity's population that is necessary for the state formation is rather important because sometimes we observe a tendency to underestimate it. As a result, some scholars do not quite differentiate between a small chiefdom consisting of a few village communities and an early state. For example, from my point of view, in Fluehr-Lobban's scale of the states' sizes: 'minimal state' – from 1500 to 10 000; 'small state' – from 10 000 to 100 000, 'state' – more than 100 000 (Fluehr-Lobban 1990: 79), the lower limit appears to have been set too low.

I believe that while estimating the population size that is necessary for the existence of a state we must distinguish between two evolutionary situations: A) the case of independent and spontaneous state formation on the basis of transformation from any non-state type of political system (evolutionary forerunner to early state or alternative to it); B) the case of a state's existence in conditions of a sufficient number of neighbouring or genetically linked states (that is, within a cluster of closely linked states). These are substantially (and, sometimes, principally) different evolutionary situations. As usual, in situation A (which could be regarded as a phase transition) for the state formation a larger population is needed than the population that is minimally necessary for the support of a state's existence in situation B<sup>9</sup>. In addition to this, it makes sense to take into account the fact that for the formation of a small state more population is necessary than for its continuing existence. The reason is that later such a state may split into two or more states and the population of each such state would be smaller than the one of the original state.

Against this background let us analyze Claessen's statement that for the state formation population of at least a few thousands is needed. In particular, Claessen mentions an example of small Tahitian polities with population of about 5 000 each that he identifies as states (Claessen 2004: 77). Let us examine this identification. As it was demonstrated subsequently by me and Korotayev, for the period prior to the discovery of the islands by James Cook in the late 18<sup>th</sup> century the Tahitian polities could hardly be regarded as states (see *e.g.*, Bondarenko and Korotayev 2003; Grinin 2007f; Grinin and Korotayev 2009a). We can only explain Claessen's identification of the pre-contact Tahitian polities as states by his very low statehood threshold (we have already mentioned this in our earlier publications *e.g.*, Grinin 2007e: 18, 177; Grinin and Korotayev 2009a).

As regards Claessen's assertion itself, I would like to maintain that for the state formation (and, especially, for the independent state formation) the population of a few thousands is not usually sufficient. On the one hand, for the earliest phases of the Ancient epoch the average sizes of settlements were substantially smaller than for later periods, and, consequently, the processes went there in a different way in comparison with periods when the urbanization demographic indicators significantly grew; yet, on the other hand, it appears rather probable that such ancient Mesopotamian polities as early 3<sup>rd</sup> millennium Ur with its population of 6 000 were not states, but rather primary state analogues (see Grinin and Korotayev 2009a). However, as at the present-day level of our knowledge on the Mesopotamian polities of the period in question it appears impossible to maintain anything definite as regards the typology of respective polities, the above mentioned statements can only be regarded as hypothesis (see, in particular, Grinin 2007e, 2007f). Our position stems from the idea that in order that such a major aromorphosis could occur rather favourable conditions were necessary; and those conditions appear to have included the presence of sufficiently large early state analogues. Note that the Mesopotamian civil communities achieved this level in the early 3<sup>rd</sup> millennium BCE, whereas the Egyptian 'noms' did this substantially earlier. In other words, the process of primary state formation appears to have usually proceeded not 'vertically' (that is, through the direct transformation of small pre-state societies into

states), but ‘horizontally’ (that is, first the formation of early state analogues took place, then grew their number and sizes, and, finally, within a system of such relatively large analogues first primary states originated).

However, in other conditions an early state could emerge with population of several thousands, but this implied the existence of other states in the neighbourhood. Such a state could form through a ‘matrix’ way, for example, through establishment of colonies. Actually, the Greek and Phoenician colonies could not have initially a larger population that could hardly be transported with the existing seafaring technologies (especially together with all the belongings, including domestic animals). In addition, if a polis was left by a losing party (that established a colony), then this colony by definition only comprised a part of the population of the original polis, whereas the poleis' average size was not large at all (as we shall see below).

As has been already mentioned above such small states could also emerge as a result of the split of a larger state. Thus, the population of a few thousands can be regarded as a sort of ‘border zone’<sup>10</sup>, as states do not seem to have been able to emerge independently with such a population, but in conditions of the presence of established state (and, especially, if the state has already become the prevalent form of political organization) new states may have appeared with such population levels through ‘matrix’ (‘multiplication’) way or through the split of larger states.

The Greek *poleis* are usually considered as a classical example of smallest states; there were many hundreds of them, and many of them had population of a few thousands. Even in the Early Modern Period we have a rather nice example of a large number of smallest states (though already not early ones) – for example, on the territory of Germany. In the second half of the 17<sup>th</sup> century Germany was a conglomerate of a variety of secular and ecclesiastic sovereign states whose number was about 300, in addition to dozens of Free Cities (Volina 1963: 279; Rayner 1964: 8). Note that, though, according to the Peace of Westphalia, German states were parts of the Holy Roman Empire, they had (according to the same treaty) a full independence from the Emperor both in their internal and foreign policy, with the only formal restriction that they had no right to enter into those alliances that were hostile to the Empire

and the Emperor (Porshnev 1963: 405), whereas certain limits for the sovereignty of early, and even developed, states were not infrequent at all. Thus, 4 000 000 of the German population of that time were divided among 300 states. Thus an average population of a 17<sup>th</sup> century German state was just a bit more than 13 000 (Volina 1963: 279). Taking into consideration the presence of such relatively large states as Bavaria, Saxony, Brandenburg, Mecklenburg etc., the population of many German states was substantially smaller than 10 000<sup>11</sup>.

However, it makes sense to repeat that such smallest states could only exist in very special conditions (within systems of large clusters of states, in special economic and ecological niches, as a colony gaining its political independence etc.). Hence, a state's population of less than 10 000 may be regarded as a certain deviation from the norm. That is why I single them out in a special category of the smallest early states that could only exist in very special geopolitical and historical conditions (see Grinin and Korotayev 2009a).

Polities with population of at least about 15 000–20 000 have much more chances to transform independently into states. Population of 50 000–100 000 is even much more favourable for this process. 100 000 is the lower limit for the states that can be regarded as medium-size ones. For a polity with a population of several hundred thousands its chances to transform into a state grow very rapidly indeed.

### **Classification of states and their analogues according to their sizes**

The differences between early states in their population (and, accordingly, in complexity of their structures) may be reflected by the following scheme:

- *the smallest early state* – with population between a few thousands and 15 000;
- *small early state* – with population between 15 000 and 50 000;
- *medium-size early state* – with population between 50 000 and 300 000;
- *medium-large early state* – with population between 300 000 and 3 000 000;
- *large early state* – with population more than 3 000 000.

Accordingly the early state analogues may be subdivided into following groups:

- ***the smallest early state analogues;***
- ***small early state analogues;***
- ***medium-size early state analogues;***
- ***medium-large early state analogues;***
- ***large early state analogues*** (however, stable forms of such analogues do not appear to have been attested).

For the comparison of sizes of early states and its analogues see Table 1.

Yet, it is important to take into consideration the fact that the differences between the smallest (and, frequently, small) early states and their analogues often become hardly detectable – simply because their small size makes many administrative subsystems, institutions, and functions unnecessary. One wonders if this point is not one of the main generators of disputes as regards the classification of such polities. Hence, it appears possible to speak about some ‘critical mass’ of population, beyond which the evolutionary advantages of the early state become more evident. There is also a limit, beyond which an early state analogue becomes unstable. In particular, according to a well-grounded opinion of some scholars, large chiefdoms usually become unstable already in the population interval between 30 000 and 50 000 (see Feinman 1998: 97), which is connected with peculiarities of ideology and traditional relationships that are typical for such analogues, within which authority tends to prevail over raw military might or institutionalized power (see Chabal, Feinman and Skalník 2004: 50; Skalník 1996, 1999). Beyond the above mentioned limits old ‘traditional’ forms and ideologies are likely to stop working effectively<sup>12</sup>, that is why their disintegration (or transformation into state structures) begins. Thus the above mentioned evolutionary threshold is situated in the area between small and medium-size early state.

However, some analogues grew substantially over the above mentioned limit of 30 000–50 000. But in any case an absolute critical size of early state analogues seems to be in an area of a few hundred thousands; the growth over this limit leads either to an early state analogue's disintegration or to its transformation into state. That is why such analogues are very rare, and they can only exist in pre-

sence of large neighbouring states and in special ecological conditions (see below for more details). Most frequently such polities are represented by some political systems of the nomadic pastoralists; yet, the population of these supercomplex chiefdoms, even according to the most 'optimistic' estimates never exceeded 1 500 000 (Kradin 2001a: 79; 2001b: 127). The population of some such political systems (for example, Attila's 'empire') could be very large, yet such polities were very unstable.

Hence, such analogues only correspond to smaller cases of the group of medium-large states. As regards stable analogues of large early states, they do not appear to have actually existed at all, though one could find unstable polities of this type (for example, the early Arab-Islamic polity of the 7<sup>th</sup> century BCE, that quite fast [already during Mu`awiyah's rule in the 660s and the 670s] transformed into a state [see *e.g.*, Bol'shakov 1998]).

**Table 1****Types of Early States and Early State Analogues**

<i>Polity size (population)</i>	<i>Early state type and its examples</i>	<i>Early state analogue type and its examples<sup>13</sup></i>
1	2	3
From 5000 to 15 000	The smallest early state (some medieval German states; possibly some Greek <i>poleis</i> )	Tribal confederations of the Tuareg
From 15 000 to 50 000	Small early state (typical city-states of Central Mexico at the eve of the Spanish Conquista)	Small early state analogue (Iceland in the 10 <sup>th</sup> century)
From 50 000 to 300 000	Medium-size early state (the Hawaiian state in the 19 <sup>th</sup> century)	Medium-size early state analogue (the Aedui, Arverni, Helvetii in pre-Caesar Gaul)
From 300 000 to 3 000 000	Medium-large early state (the early state in Poland, the 11 <sup>th</sup> – 14 <sup>th</sup> centuries)	Medium-large early state analogue (polity of Xiongnu, 200 BCE – 48 CE)
More than 3 000 000	Large early state (the Incas' Empire)	There are no recognized stable large early state analogues

## **POLITY SIZES AND POLITOGENESIS MODELS. CONDITIONS OF STATE FORMATION**

The materials discussed above make it possible to produce some important conclusions that let us understand politogenesis processes and state formation in a more adequate way.

**1. Factors.** The polity form is influenced both by the size of its population and the size of its territory; taken together they produce another important indicator – the population density. The population density (naturally, in conjunction with characteristics of relief and other geographical features) determines up to a very considerable extent the **intensity of contacts within the given social system** (see *e.g.*, Korotayev 1991; Grinin 2001, 2007f; Grinin and Korotayev 2009a). The higher this intensity was, the more salient the political development was; this increased the probability of the emergence of the state proper rather than its analogue. The growth of population pressure led to the intensification of contacts (including military contacts), which, in its turn, could lead to the increase in polities' sizes (as a result of conquests, or polities' unification for common defense) and the crossing of the threshold, beyond which the state formation became practically inevitable (see Grinin and Korotayev 2009b on an immense importance of wars in politogenesis; see also bibliographic references on this subject). This supports the idea that the state formation process is connected with the intensity of contacts with other social systems; hence, this process could hardly occur without certain external factors (see Grinin 2007f). That is why the early state analogues developed more frequently in more or less isolated societies (or isolated clusters of societies), like this was observed, for example, in Polynesia.

It is also significant to consider the geographical situation, landscape and climate's features as the major factor which can actively promote formation of those or other models of politogenesis. Thus, it is well-known that fertile valleys of the large rivers where the far-reaching irrigational agriculture is created, in an incomparable greater degree contribute to the formation of the early states, than steppes seldom inhabited by nomads (in the latter ones the large polities are formed quite seldom and more often not in the form of states, but rather as the quasi-state alliances of nomads). In highlands or in semidesertic districts of the Near East and the North Africa the analogue political forms of the societies' or-

ganization remained for a long period in particular because of the relief and climate's features. (The problem of the climate and landscape influence on a course of politogenesis is considered in more details in Grinin 2007e, 2007f.)

**2. Conditions.** I believe that it makes sense to speak about two types of conditions that are necessary for the transformation of pre-state polities into states: a) general objective conditions; b) special (both objective and subjective), that is, concrete historical conditions (see Grinin 2007f).

The general objective conditions are those characteristics (indicators, parameters) that open a potential possibility for stateless polities to transform into state; before those conditions emerge a state has no chances to appear. Though there is an ongoing discussion as regards which precise conditions should be present in order that even an inchoate state could emerge, there is a considerable degree of consensus on a few points: that those conditions include a certain size of respective polities as well as a certain level of sociocultural and sociopolitical complexity on the basis of sufficiently productive economy or a regular influx of surplus from outside.

After a polity acquires those general objective characteristics, it may transform into a state. However, in order that this transformation could actually take place, additional special (objective-subjective) concrete historical conditions are necessary. Peculiarities of geographic position (access to the sea, position on major trade routes, or to mention a contrary example, a high degree of isolation), certain characteristics of external social environment (for example, the presence of a developed, threatening, or weak neighbour), production basis, societal organization principles, historical situation; presence, or absence of relevant historical traditions; presence, or absence of a necessary impulse etc. that could both contribute to the state formation and prevent it. For example, in the Hawaii and Tahiti islands the objective conditions for the state formation emerged well before the late 18<sup>th</sup> century. But only when the islands were discovered by Europeans and the local rulers got possibilities to use fire arms and other European technologies, the process of transformation of the respective Polynesian polities into states started.

Thus, the time lag between the formation of objective and subjective conditions of state formation may be of an order of several

centuries, because a stateless polity transforms into a state only when all the necessary conditions (including special, and even unusual ones) are present (we shall discuss this point in a bit more details later).

**3. Models.** What happens if a polity has general objective conditions for state formation, but lack sufficient concrete historical conditions for that? Some of them may stagnate. Yet, some other polities may continue their development (and sometimes in a rather intensive and successful way). But they follow their own pathways that could be rather different from the ways leading to the state formation; in some sense they follow parallel courses. In addition, there is a considerable diversity as regards the pathways to the statehood *per se*. My research (Grinin 2007e, 2007f) has made it possible to identify the two main models of state formation:

a) the **vertical** model, that is, the direct transition from pre-state polities to the state. This could also lead to the formation of relatively small polities, in particular as a result of a unification of a few settlements into one (in Greece this way was called *synoikismós*). However, large states could also emerge ‘vertically’. A bright example of this model is provided by the history of formation of the Zulu state in the early 19<sup>th</sup> century. This state very rapidly (literally within 2–3 decades) passed a way from a conglomerate of chiefdoms to a big state, which is even sometimes defined as an ‘empire’. In the late 18<sup>th</sup> century and the early 19<sup>th</sup> century the chief Dingiswayo united about 30 Zulu tribes (Büttner 1981: 184; Gluckman 1940; Ritter 1968; Service 1975: 109). But this was still a rather loose polity. The famous Zulu leader Shaka (ruled in 1818–1828) was a successor of Dingiswayo (who was killed by his enemies); he managed to establish a power (Skalník 2004) over a territory of 200 000 square miles that included about 100 various ethnic and subethnic groups (‘tribes’). From small chiefdoms (that were prevalent in the late 18<sup>th</sup> century) whose chiefs could put together for a battle from 50 to 300 warriors (Gluckman 1960) in the first decades of the 19<sup>th</sup> century a transition to a large state took place; this state had a regular army that, according to some estimates, had (together with auxiliary forces) about 50 000 warriors (L’vova 1984: 47; Davidson 1968: 5; 1984: 161; Mackee 1974: 91; Potekhin 1954: 545; Gluckman 1987 [1940]: 29). This was accompanied by transformation of the sys-

tems of local chiefly power and justice (Davidson 1984: 161; Service 1975). Up to some degree it appears possible to speak about the vertical model of state formation with respect to the emergence of Genghis Khan's state (till the beginning of his conquests), when he managed to unite (partly by peaceful means, and partly by military ones) diverse Mongol and other chiefdoms and tribes into one state. On the other hand, it appears difficult to identify which of those components were truly pre-state polities, and which of them might have rather been early state analogues<sup>14</sup>;

b) the **horizontal** (and apparently more wide-spread) model implied at the first phase the formation of early state analogues. It was only at later phases that we observed a lengthy process of transformation of early state analogues into states as a result of the continuous growth of their complexity, competition and contacts. Note that as a result we tend to observe the formation of larger and more developed states (in comparison with those states that formed as a result of transformation of truly pre-state polities). Thus, in this model the transformation of an early state analogue into an early state takes place within one evolutionary stage of politogenesis. Note that at final phases such a transition often proceeds rather quickly, sometimes in a 'revolutionary' (that is, violent) way. This may be connected with the unification of a few analogues into a larger state, for example, through military amalgamation (as this process went on among the Hawaiians), but it could occur through an internal transformation of an early state analogue (as this was observed among the Scythians).

**4. Classification of stateless societies.** Though any society that historically predates the early state formation is by definition a historically pre-state society, it may precede not necessarily a small (or the smallest) state, but immediately a medium-size, or large state (Grinin 2003, 2007e). The larger and more complex the 'pre-state' polity, the higher the probability that it will transform directly to a large state, bypassing the phases of small and medium-size ones. Indeed, one wonders if it is reasonable to maintain that the complex chiefdom in the Hawaii Island (the largest island of the Hawaiian Archipelago) with population of 100 000 (Johnson and Earle 2000: 285) was at a lower level of development and complexity than the Tahitian 'states' mentioned by Claessen or

the above-mentioned the early 3<sup>rd</sup> millennium ‘state’ of Ur? It is perfectly evident that this is not the case. Indeed, after the arrival of Europeans in the Hawaiian Archipelago we observe a rather rapid formation of a medium-size state with population of 200 000–300 000 (Seaton 1978: 270; Johnson and Earle 2000: 284; Earle 1997; Wright 2006).

**5. Pathways of transformations into early states.** Thus, a stateless polity may transform into a state from the following levels:

1) from evolutionary pre-state level – for example, through *synoikismós*. This way was typical for some Greek societies (Gluskina 1983: 36; see also: Frolov 1986: 44; Andreev 1979: 20–21), as well as for Mesopotamia in the late 4<sup>th</sup> and early 3<sup>rd</sup> millennium BCE (Dyakonov 1983: 110);

2) from the level of small state analogues (for example, this way the Great Mongol Empire of Genghis Khan started<sup>15</sup>);

3) from the level of the medium-size state analogues (as happened, for example, in the Hawaiian Archipelago);

4) even from the level of the medium-large state analogues (as happened, for example, in Scythia in the early 4<sup>th</sup> century BCE).

**6. Special conditions of state formation.** As has been mentioned above, the formation of any new evolutionary anamorphic quality (including the state formation) is only possible in presence of special conditions that are favourable for this quality. In other words, I believe that the state formation usually requires the emergence of special, unusual, new conditions and circumstances, extreme situations connected with sharp changes of habitual life, the necessity of new decisions and reforms. Such circumstances may include conquests or military amalgamations; certain crises; a pronounced incongruence of old administration methods and new critically important tasks; civil confrontation; artificial concentration of population, or its sharp growth; weakening or discredit of power in conditions of emergence of complex problems; emergence of an especially outstanding leader; some important technological or social innovation and other factors of this kind, including, for example, the discovery of new lands (see Grinin 2003, 2004b, 2007e).

Claessen expresses similar ideas. However, the value of Claessen's approach is significantly diminished by the fact that he underestimates the role of the military factor, that, from my point of view, is the most important one among all the other causes initiating the state formation process (see Grinin 2001–2006; 2003, 2004b, 2007d, 2007e, 2007f; see also Grinin and Korotayev 2009b in the present issue).

Note that the degree of 'uncommonness' is determined by peculiarities of the society itself and its historical pathway. On the one hand, at which phase of its development a stateless polity will transform into a state depends up to a considerable degree on an accidental concatenation of objective and subjective circumstances. Yet, on the other hand, the higher the polity's size, the higher the probability of the emergence of subjective conditions that are necessary for the state formation (including the emergence of political actors of the necessary type).

The point that the state is born in special circumstances is relevant not only for primary, but also for almost all secondary and tertiary states, because for any concrete people this moment represents a serious evolutionary turning point. Even when states and their analogues are formed using a ready matrix (as was the case with the establishment of colonial polities by Greeks, Phoenicians and some other peoples), even there colonists were pressed to move from their homelands by some special circumstances and factors (defeat, overpopulation, thirst for wealth etc.). This idea also provides an additional explanation for the mechanism of the 'horizontal' model of state formation, that is the state formation on the basis of state analogues. If a polity corresponds to a state with respect to all its objective characteristics, if it has developed political tradition and political experience, if it has an elite that is sophisticated in administrative matters, an established institution of central power (for example, an institution of supreme sacral chief), that is, if we have a clear analogue of an early state, then the transformation of an analogue into a state can occur through internal changes, reforms, development of old political institutions and emergence of new ones etc. This way it happened in many places – for example, in Scythia, the Hawaiian Archipelago, among the Franks etc.

## FINAL NOTES

Hence, the widest possibilities for the competition of alternative political forms is found within the interval of a polity's population between a few thousands and a few dozens thousands. Beyond the limit of 100 000 the possibilities of competition of such forms begin to decrease sharply (and its place is taken by the evolutionary competition between various forms of the early state). The point is that in early state analogues the population growth over a certain limit may lead to its transformation into a larger and more complex analogue, but beyond a certain limit it leads either to this polity's degeneration (primitivization, disintegration), as happened, for example, with the Xiongnu [see Kradin 2001a]), or its transformation into a state, as is exemplified by the Mongol Empire of Genghis Khan.

The presence of medium-large and especially large state analogues could only be observed under the following conditions.

1. The possibilities of their existence depend directly on the presence of large sedentary civilized neighbours and the early state analogues' ability to compete with them militarily. Sizes, might, and complexity level with respect to the realization of external political functions of the nomadic agglomerations ('empires') correlated rather tightly with sizes, might, and political culture of those states, with which the nomads regularly interacted (see *e.g.*, Barfield 2006: 429; Khazanov 2002; Irons 2004). The high level of development of the Gaul polities is likely to be accounted for to a considerable extent by the presence of such a rich and culturally complex neighbour as the Roman Republic (see Grinin and Korotayev 2009a: 271–324).

2. As my analysis indicates, early state analogues (including large early state analogues) get significant advantages in marginal (from the point of view of possibilities to produce the largest amounts of surplus that can be used to support the growing societal complexity) ecological conditions and with less perspective evolutionary economic forms (in particular, with extensive animal husbandry that implies a nomadic way of life). The sedentarization can change rather rapidly many forms of societal administration. This can be seen quite clearly with respect to the transition to statehood in Scythia in the 4<sup>th</sup> century BCE (see *e.g.*, Grakhov 1971; Khazanov 1975).

The point that such large agglomerations of nomads were either very rare, or very unstable provides an additional confirmation for the ideas expressed above: within the overall evolutionary process it appears possible to single out various real alternatives of development; but it is also possible to identify an 'arterial' evolutionary pathway that produced those forms that sooner or later became actually dominant, whereas the forms representing 'lateral' evolutionary lines could only compete with evolutionarily more perspective forms up to certain limits (of course, those limits include a polity's size limit) or within some special (usually marginal) natural and social environments.

## NOTES

<sup>1</sup> In general, we know quite a few historical and ethnographic cases of polities that (a) with respect to their sizes, complexity and some other parameters surpassed significantly typical pre-state polities (simple chiefdoms, tribes, communities); (b) that were not inferior to many early states (especially inchoate states) in their sizes and levels of sociocultural and political complexity; c) that, however, differed substantially from the early state as regards their political structures and administrative systems (Alexeev *et al.* 2004; Beliaev *et al.* 2002; Bondarenko 1995a, 2000a, 2000b; Bondarenko, Grinin and Korotayev 2002, 2004; Bondarenko and Korotayev 2000a, 2000b; Bondarenko and Sledzevski 2000; Crumley 1995, 2001, 2005; Grinin 2000, 2002a, 2002b, 2003, 2004b; Grinin *et al.* 2004; Korotayev 1995a; Kradin *et al.* 2000; Kradin, Bondarenko and Barfield 2003; Kradin and Lynsha 1995b; McIntosh 1999; Possehl 1998; Schaedel 1995; Bondarenko 1995b, 2000a, 2001; Bondarenko, Grinin and Korotayev 2006; Bondarenko and Korotayev 2002; Girenko 1993; Grinin 2006a, 2007f; Grinin *et al.* 2006; Korotayev 1995b, 1995c, 1996, 1997a, 2000a, 2000b; Kradin and Lynsha 1995a; Kradin and Bondarenko 2002; Popov 1995a, 1995b, 2000; Shtyrbul 2006).

<sup>2</sup> We define the **state** as a category designating a system of specialized institutions, organs, and rules that secure internal and external political life of a society; this system is a power, administration and order maintenance organization separated from the ruled that must possess the following characteristics: a) sovereignty (autonomy); b) supremacy, legitimacy, and reality of power within a certain defined territory and a certain set of people; c) the ability to coerce to fulfill its demands, as well as to alter relationships and norms (see Grinin 2007e; see also: Grinin 2007f; Grinin and Korotayev 2009a for a detailed justification of this definition).

<sup>3</sup> For example, complex nomadic societies frequently surpassed militarily sedentary states; however, according to Irons and Kradin, they preserved such forms of political organization that were alternative to statehood (Irons 2004: 472; see also Korotayev, Kradin and Lynsha 2000; Kradin 2001a, 2002; Kradin and Bondarenko 2002).

<sup>4</sup> Among other things it makes sense to mention the following: the growth of degree of material independence of the upper strata from the lower ones; the change in relationships between the elites and the commoners (as regards the increase in nonequivalence of exchange of 'services').

<sup>5</sup> The last two points have been described very well by Claessen and Skalnik, but only with respect to the early states (Claessen and Skalnik 1978a, 1978b, 1978c, 1978d).

<sup>6</sup> I have developed special methods and sets of indicators in order to distinguish between early states and their analogues (see Grinin 2003, 2004b for more details).

<sup>7</sup> Actually, we are dealing here with a system of negative and positive feedback loops of the first, second, and even higher orders.

<sup>8</sup> I mention just some facts (from a huge data corpus) on the population of the smallest and small states (see Grinin 2003, 2007e; Grinin and Korotayev 2009a for more details). In the 28<sup>th</sup> and 27<sup>th</sup> centuries BCE the population of the city of Ur with all its vicinities (90 sq. km) was about 6 000; 2/3 of them lived in the city itself (note, however, that in that time Ur might have been closer to an early state analogue of the civil-temple community type rather than to an early state proper). The population of the Shuruppak polity (for the 27<sup>th</sup> and 26<sup>th</sup> centuries BCE) is estimated to have been about 15 000–20 000. The population of Lagash in the 25<sup>th</sup> and 24<sup>th</sup> centuries BCE approached 100 000 (Dyakonov 1983: 167, 174, 203), which makes possible to classify it as a medium-range early state. The population of a typical Central Mexican city-state on the eve of the Spanish conquest was in the range of 15 000–30 000 (Gulyaev 1986: 84); whereas the population of one of the largest 1<sup>st</sup> millennium Mayan state (most Mayan states were smaller) of the Classical Period – the city-state of Tikal – was about 45 000 (including 12 000 in the city itself), whereas its territory was 160 sq. km (Gulyaev 1977: 24; on the methodology of respective estimates see Gulyaev 1979: 114–115; Culbert and Rice 1990; Fletcher and Gann 1995). The early state of Monte Alban in the Oaxaca Valley in Mexico is estimated to have had a population of 40 000–50 000 (Kowalewski *et al.* 1995: 96). Even in the 5<sup>th</sup> century BCE the population of the largest Greek *poleis* such as Sparta, Argos, Thebas, or Megaras was in the range between 25 000 and 35 000 (Mashkin 1956: 241), the population of the most other *poleis* was smaller. For example, even in the period of its peak prosperity (the 5<sup>th</sup> and 4<sup>th</sup> centuries BCE) the population of a rather famous Black Sea *polis* of Olbia hardly exceeded 15 000 (Shelov 1966: 236). The population of Pisa, a rather rich and politically active Italian city-state hardly reached 50 000 by 1233 (Batkin 1970: 208). An approximately similar population (50 000–60 000) was observed in Florence in the 14<sup>th</sup> century (Rutenburg 1987: 74, 112). The population of less famous Italian city-states was substantially smaller.

<sup>9</sup> I suppose that for a phase transition of A-type heightened values of relevant variables are necessary while the number of population appears to be one of the chief variables in the SFP.

<sup>10</sup> We call it this way because some evolutionary pre-state polities preceding the state could have such a population; what is more, they could have even a larger population (though such evolutionary pre-state polities were rather rare indeed).

<sup>11</sup> However, one should take into consideration the fact that as a result of the Thirty Years' War the population of Germany has noticeably decreased.

<sup>12</sup> It appears necessary to take into consideration the point that, on the one hand, small polities (including small states) generally turn out to be more stable than larger polities. However, on the other hand, the ability to prevent the disintegration processes is regarded by many scholars as a typical characteristic of the state (Cohen 1981: 87–88; Gledhill 1994: 41), and the inability to do this is considered to be an indicator that we are still dealing with a large chiefdom.

<sup>13</sup> See Grinin 2003 for details on cases mentioned in this table.

<sup>14</sup> However, if we rely on Fletcher's opinion maintaining that they formed a rather large but not always stable tribal confederation (that included both the dominant Mongol tribe and, possibly, non-Mongol tribes [Fletcher 2004: 213–214, 220, 235]), then we should treat them rather as early state analogues.

<sup>15</sup> As by the moment of the beginning of his political career his father's confederation had already disintegrated (Fletcher 2004: 235).

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