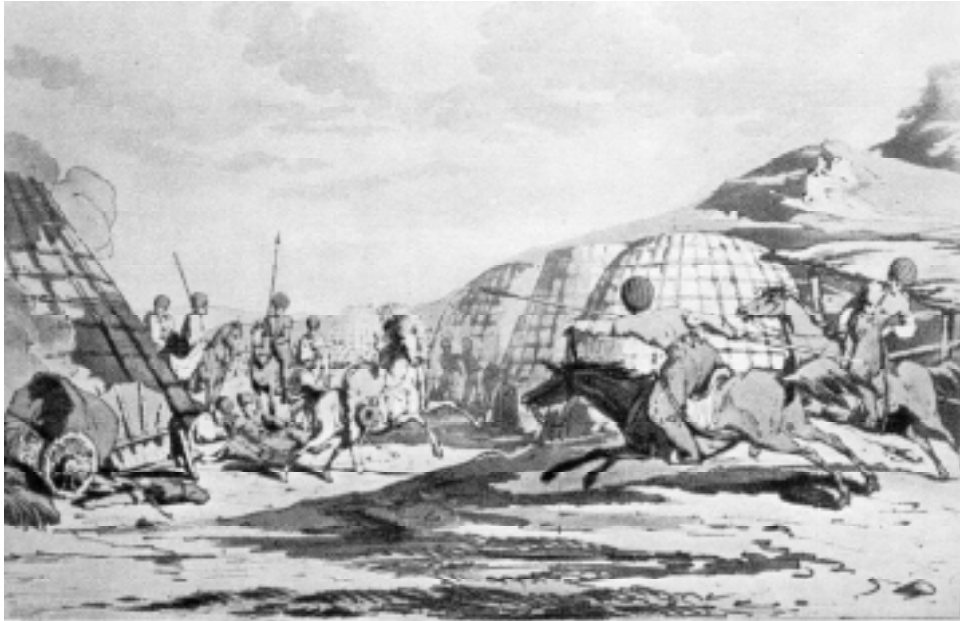


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Sessions 116 & 221 Clash of Cultures.Nomads
at the Frontiers of Christian Europe I-II

Paper 116-c “Cultural and Economic Activities in the
Nomadic Societies of the Trans-Pontine Steppe”

by

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Cultural and Economic Activities in the Nomadic Societies of the Trans-Pontine Steppe

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Until their confinement on reservations and eradication by the Russians at the beginning of the nineteenth century the nomadic peoples occupying the extensive pastoral lands of the Trans-Pontine Steppe had enjoyed a long-established, environmentally-determined, high-productivity economic regime and stable form of social organisation. Its organisation was, at root, resource based in character. In the extensive grasslands extending eastward from the Carpathians to the Urals and beyond forces, transmuted into soft and subtle influences in the temperate environment of western Europe, stood out in stark relief in what was essentially a climatically marginal area. Each change in temperature and precipitation altered dramatically the economic potential of the region and the relationship of the indigenous populations to their environment.

The Nomadic Environment. That picture, which portrays the Trans-Pontine steppe as having a climatically differentiated but unchanging form, derives from a conceptual transpositioning of the characteristics of western European weather-systems to the steppe. Yet whilst in western Europe, these natural forces, forged out of a juxtapositioning of ‘continental’ and ‘maritime’ climatic zones, created a temperate environment wherein their impact was transmuted into soft and subtle influences which almost imperceptibly effected changes in the landscape, in the steppe the situation was very different. The steppes were in relation to Western Europe a climatically marginal area where ‘continental’ weather-systems, largely unaffected by the moderating influences of the ‘maritime’ zone, created an environment wherein these natural forces stood out in stark relief. Each change in temperature and precipitation altered dramatically, through both time and space, the economic potential of the region. As contemporary western travellers were only too well aware, over the vast areas of the steppe the climate was marked by extreme intra-annual ranges of temperature, cold winters which became severe eastward, warm summers which became hot southward, and moderate summer rainfall followed by winter snow. Only sheltered parts of the Black Sea coast avoided these extremes and enjoyed a Mediterranean-type winter.

From the early-eighteenth century those westerners who visited St Petersburg also had available to them the latest findings of a new breed of scientific meteorologists which revealed that over time these extreme climatic variables were subject to far wider variations than were normal in the visitors’ homelands. These local savants certainly noted that there were phases of climatic deterioration. At such times they recorded more protracted but milder periods of sub-zero temperatures, which ensured a lengthening of the time between the freezing of the Neva river and break-up of the ice thereon, and also a heavier than normal winter snow fall, peaking in December. In the most favourable conditions the river only remained frozen for some four months from about the 1st December-25th March. At worst this period could be temporally extended to a period of six months from the 20th October-27th April¹ and spatially, as in 1778, could come to encompass the whole of “the Gulf of Finland (which was) covered with ice, (so that) sledges began to pass from Petersburg to Cronstadt.”² In these latter circumstances winter passed almost immediately into a brief but very intense summer characterised by high tempera-

tures and little or no rainfall.³ Yet even amongst those who availed themselves of this information, as a surprisingly large number probably did, most if not all lacked the necessary knowledge required to allow them to overcome their pre-conceived perception of the Trans-Pontine steppe as having a climatically differentiated but unchanging form.

In contrast the 'primitive' nomadic peoples inhabiting that steppe, who would have eschewed any such intellectual pretensions, would, on the basis of their own very special but different knowledge, have been only too aware of what these meteorological changes portended. The protracted, cold and snowy winters posed a major hazard to their flocks and herds. Such winters absolutely denuded the pastures of grass. With a limited availability of winter feeds, which had to be employed over as much as an additional two months, these foodstuffs were provided with great parsimony. The oxen, accordingly, lost weight and sometimes could not even raise themselves without help of the herdsman: often the dry straw bedding and cold water were their only food. The cows were treated little better, ordinarily receiving only hay and flour like the calves. In these circumstances calving loss-rates rapidly increased. Many of the emaciated adult animals succumbed to the cold or suffocated in the deep snowdrifts, which covered the steppe. When, normally about four-fifths of the way through the prevailing climatic-economic cycle (in 1557, 1769 and 1838/41 but not in about 1623 or 1691), the steppes experienced particularly severe winters, the situation was nothing short of disastrous. On these occasions the chroniclers related that men and animals alike perished in great numbers from the cold. With hot and arid summers following so rapidly on such protracted and severe winters, moreover, "spring," was normally confined to the last week of April and May. At this time the steppes, as a result of the melting snows, become almost impassable. Swollen streams and watercourses impeded the nomads' intra-annual migrations, creating obstacles, which they had to overcome. The rapid transition from a frozen landscape to one baked dry by the sun, moreover, ensured a rapid water run-off allowing very little absorption of moisture into the soil. Subsequent grass growth was accordingly weak and the summer grazing was at such times extremely sparse.

The migratory pattern of the nomadic herding economy could to some degree alleviate even these extreme conditions. In the central steppe zone winters were spent as far to the south as possible so that the stock experienced the shortest possible period when the steppes were denuded of grass. Summers were passed as far to the north as possible. Here the slightly higher summer precipitation rates yielded a somewhat more verdant grass cover for the animals to graze and the transportation of the stock between the two areas in the spring was made as easy as possible by the ingenious use of temporary bridging to cross swollen streams. Nomadic pastoralism thus became more extensive in form.

The effects of climatic change were not confined, however, to causing a simple extension of the nomads' annual inter-regional migrations. Within the broad tracts of steppe, each dominated by its own particular vegetation type, were significant areas of land which in terms of precipitation and soil type can only be characterised as experiencing an inter-zonal marginality. In phases of climatic amelioration the differentiation of these areas from their surrounding region was small. In phases of deterioration, however, conditions in these lands stood out in stark contrast to those in the neighbouring countryside. In such a situation within the southern steppe zone only between the Molochnaya and Volochya rivers, where low undulating hills provided a focus for enhanced precipitation, was there a relatively plentiful grass cover. To both the west and east of this region the open steppe was transformed into an environment better characterised as desert steppe. In the west the pastoral potential of a large area, encompassing lands between the northern Donetz and the lower Dnestr rivers, was thus markedly reduced. To the east this process of vegetal degradation also affected the steppe lands lying to the northwest of Azov. Within the central-eastern steppe zone, in the middle trans-Volgan lands, south of the Medveditsa and Great and Little Uzen rivers, where the soils were thin and precipitation highly er-

matic, climatic deterioration brought a similar process of vegetal degradation. This made the region indistinguishable from the desert steppe to the south east of it. Climatic deterioration thus added a specific spatial dimension to the extended patterns of nomadic migrations.

Whether in favourable or unfavourable conditions, however, the nomads' way of perceiving their steppe environment was different from that of the western European. The availability of water was critical to their own and their flocks' existence and how that water was distributed across the landscape was a matter of primary importance. As has already been indicated above it was this criterion of water availability, which served to distinguish the wooded from the open steppe, but this simple climatic-vegetation division was in fact far subtler than suggested by the 'broad-tract' analysis of contemporaries. Over much of the open steppes the landscape did indeed conform to the savants' descriptions. They were 'perfectly level', their turf 'smooth and firm.'⁴ Where low undulating hills provided a focus for enhanced precipitation between the Molochnaya and Volochya rivers, however, there was a relatively plentiful grass cover. Also, in favourable conditions, there was considerable tree growth, sufficient in density for the Nogais to regard it as capable of providing cover for their enemies.⁵ Further north such physical undulations in the landscape became more common between the Pre-Volgan and Valdai Hills and, providing analogous conditions for increased precipitation, created the environment for that mixture of steppe grasslands and islands of elevated deciduous woodland which characterised the wooded steppe. The heavily wooded Pre-Volgan and Valdai Hills, moreover, although said to be only 'about 1,200 feet above the sea' and 'the height is inconsiderable, and gives a striking impression of the gentle and plain level,'⁶ still collected enough rainfall to be the source for a labyrinthine river system. By this river system, water was distributed across the landscape of the Trans-Pontine steppes.

It was about this river system, moreover, that the nomads built their sense of 'territoriality', a concept that was totally different from that of the western European. In Western Europe rivers were perceived as constituting one of the elements used to define the boundaries of specific bundles of property rights. They formed part of a perimeter about an area within which economic activity took place. The nomads considered rivers in a totally different way. For them rivers provided the sinews of 'territories' which lacked peripheral delineation. Cossack and Tartar alike located their settlements in the sunken river valleys incised deep into the steppe, their structures thereby being 'concealed by the depths of the banks of the river below the level of the plain.'⁷ At the southern extremity of these valleys, which might be 15-20 yards deep and perhaps as much as 850 yards across, they sited, above the flood-line, their winter residences and those hovels used to provide shelter for their numerous flocks. It was along the course of these valleys, moreover, that they migrated in the spring, traversing northward along the banks of the river and crossing its tributary streams to their summer grazing. In passage the stock were grazed on the adjacent plain. The duration of both the stops and of the migration as a whole depended on how far the animals could wander from the river before the grass cover became too sparse. This was itself a function of the intensity of the summer heat and of the amount of water from the river that was available to encourage grass-growth and impede scorching. In favourable climatic conditions their outward journey from winter quarters might commence as early as February or March and last for only a month before the animals could be allowed to feed on rich grazing, which might extend over some 3,250 square miles. In such circumstances they were even able to sow wheat and millet in remote places, neglecting all further cultivation over the summer, till harvest time when the crop was gathered in before the nomads returned southward. In unfavourable conditions their departure might be delayed until April or May. Their progress was slow and passage northward extended, as they found their way impeded by swollen streams and were forced to make multiple stops to utilise fully the available sparse river grazing. This meant, moreover,

that there was no possibility of supplementary agricultural pursuits. They arrived at the summer grazing too late to sow and anyway with the onset of winter conditions as early as mid-September no crop could have ripened enough for harvesting. Rivers thus conditioned the nature of their agrarian activities and the length and spatial extent of their perceived 'territories' within which the waterways formed a fixed element within grazing, which lacked a peripheral delineation.

Climatic Change (Figure 1). The fluctuations that affected the nomadic economies were thus, at root, resource based in character. In the extensive grasslands extending eastward from the Carpathians to the Urals and beyond forces, transmuted into soft and subtle influences in the temperate environment of western Europe, stood out in stark relief in what was essentially a climatically marginal area. Each change in temperature and precipitation altered dramatically the economic potential of the region and the relationship of the indigenous populations to their environment. Phases of enhanced aridity resulted in increasingly sparse grazing, extended nomadic wanderings, and, as peoples encroached on each other's "territories," increased martial activity that soon evolved into an economic pursuit in its own right. Alternatively, an abatement of temperatures and enhanced levels of precipitation set this pattern in reverse. Stocking levels increased and, as nomadic wanderings became more spatially restricted, peace returned to the steppe paving the way for a more sedentary life-style that was often associated with the establishment of tillage in more favoured areas of the region.

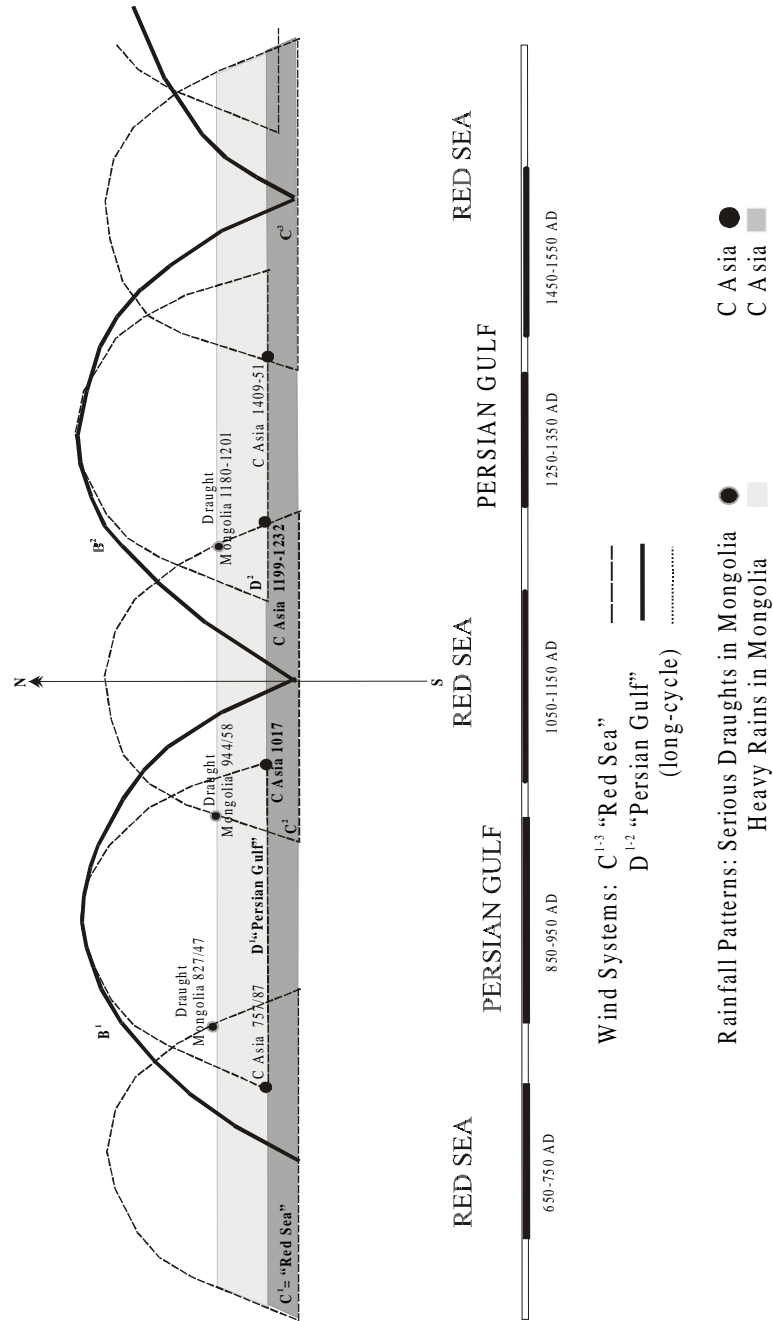
These climatic-fluctuations were of between seventy-five and one hundred and ten year's periodicity and may be carefully chronicled from the mid-eighteenth century and dimly discerned before that date. Following each other in regular sequence they imposed a distinct rhythm of economic activity within the western-most zone of the Trans-Pontine steppe.⁸ Periods of peace and prosperity, when the numbers of steppe cattle increased thus alternated with periods of declining animal husbandry when nomadic movements intertwined in the labyrinthine intrigues of contemporary power politics. The latter yielded the nomads an alternative income (from military subsidies and booty) and destroyed the pre-existing order, establishing an endemic state of warfare in the region.

The exact incidence and intensity of these phases of activity, however, depended not only on the periodicity of the climatic cycles but also upon their amplitude, out of which was born a pattern of secular long-swings superimposed upon inter-millennial movements of cooling and *rechauffement*.⁹ The so-called "Little Ice Age," coinciding with two of the shorter-term climatic-cycles (1555/74-1630 and 1630/50-1705) marked the apogee of the prevailing inter-millennial cycle.¹⁰ The former of the shorter-term climatic-cycles (1555/74-1630) accordingly marked the end of a protracted inter-millennial movement characterised by progressive climatic cooling, during which successive cycles (530/70-650, 730/70-850, 930/970-1050, 1130/70-1250, 1330/70-1450 and 1530/70-1650) were characterised by lower temperatures and increased precipitation. The second of these shorter-term cycles (1630/50-1705) similarly marked a transitional stage to a new inter-millennial phase but this time of *rechauffement*. Successive cycles (in 1705/25-80 and 1780/1800-1855) were accordingly characterised by higher temperatures and drought, when pastoral pursuits were in retreat and nomadic raiding assumed an almost endemic character. The periodicity/amplitude of each cyclical phase was thus related to its place relative to the long-swings, a process, which prior to 1650 led to a lengthening and intensification of the boom periods and subsequently from ca. 1650 ensured their acute shortening.

Conjunctural Change in the Nomadic Societies of the Western Steppe, ca 950-1450 AD.¹¹ Successive climatic cycles spanning the period covered in this session (930/970-1050, 1130/70-1250, 1335/60-1411/37¹²) witnessed dramatic changes within the nomadic societies occupying the lands of the western Trans-Pontine steppe. Environmental changes

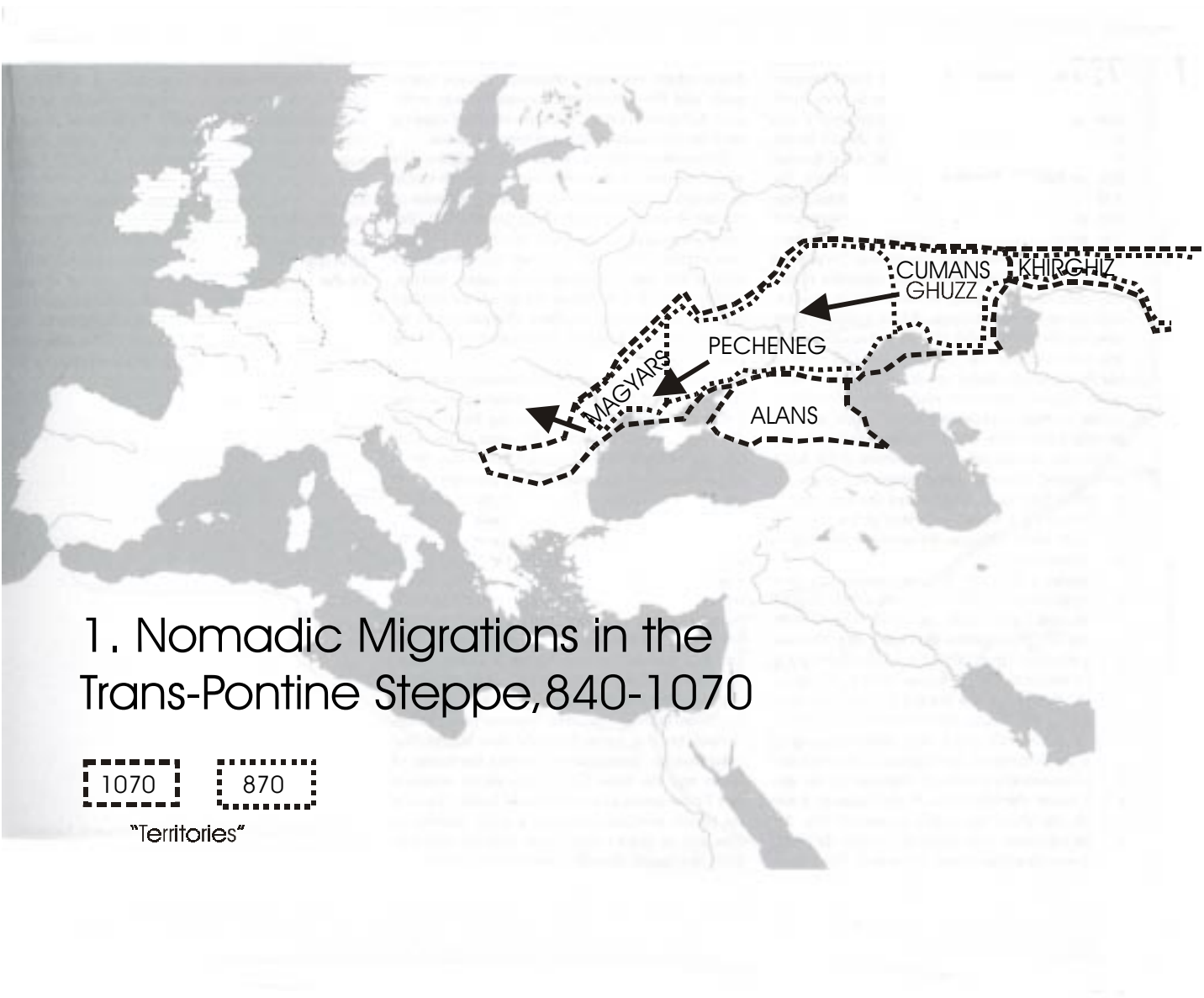
Figure 1

Schematic Presentation of Wind-Systems
and Rain-fall Patterns



were at the root of the conjunctural change in these nomadic societies. These resulted from a cyclical movement of the characteristic Central Asian summer low-pressure weather-system and a counter-cyclical process of climatic change in the lands of Khorāsān, south of the Māzandarān uplands. As the characteristic Central Asian summer low-pressure weather-system moved, during the years 560/650-850 AD, northward, increased rainfall resulted in more verdant grass growth to Mongolia, the Semirech'ye and the Trans-Pontine steppe. At the same time there seems to have been a countervailing movement in the weather system of Khorāsān, as an environment of increased rainfall and vegetation growth progressively moved southward, bringing new life to the margins of the "Great Desert" (Dasht-e-Kavīr). When the Central Asian summer low-pressure weather system moved southward again, during the years 850-950/1070 AD, and the Sub-Caspian weather system moved north, however, the nomadic heartland on the Orkhon was subject to an increasing aridity and declining animal husbandry. In these circumstances nomadic movements became intertwined in the labyrinthine intrigues of contemporary power politics. The latter yielded the nomads an alternative income (from military subsidies and booty) and destroyed the pre-existing order, establishing an endemic state of warfare in the region.

The Climatic-Economic Cycle of 850-950/1070 (Map.1). During years 850-950 AD, the Central Asian summer low-pressure weather system began on the first stage of a movement towards the south. This caused a climatic deterioration in the lands of the Mongolian steppe and that region was accordingly once again thrown into a state of turmoil with repercussions, which were to be felt far to the West. In the Asiatic steppe lands, the approach of the new phase of climatic change was heralded in 840 AD by the defeat and decimation of the eastern (Uyghurs) Horde of the T'u-chüeh on the Orkhon by the Kirghiz. The remnants of the erstwhile Uyghur horde scattered in various directions. Towards 860 AD, one group displaced the Tibetans at the garrison town of Panjikath (Bish-Baliq or Pei-t'ing) - and adopting the name of "Toghuzghuz" established themselves in the eastern T'ien-shan.¹³ Carrying forward their attack on the Tibetans, they took from the latter during the years 860-873 AD Si-chou (Yarkhoto) and Lun-t'ai (Urumchi).¹⁴ They thereby created a kingdom which spanned both northern and southern slopes of the eastern T'ien-shan. The chief group of Uyghurs seem in 844 AD to have gone to Kan-Su. At a later date it was found in Kan-chu where it gained recognition from the Chinese Emperor Hsüan (847-859 AD). The rest retreated to Tibet and An-hsi. No less significantly the Khirghiz in the aftermath of their victory on the Orkhon occupied the former Uyghur territories, extending from the Altai in the west to China in the east and penetrating deep into the lands of the Toghuzghuz and Qarluq in the south. This resulted in a displacement of other indigenous peoples in a southward and westward direction. Pressed by the Khirghiz from the north and by the fleeing Uyghurs from the east and weakened by protracted struggles with them and the Yaghmā (Qarakhanids), the Qarluq finally, towards the end of the prevailing phase of the climatic cycle in 943 AD succumbed. From that time they were merged into the Qarakhanids' rapidly expanding "empire." To the west the Kirghiz pressed on the Kimäk, a Western Siberian people, living north of the Irtysh up to the Ob. As a result the Kimäk, began themselves to press on the eastern borderlands of the Rūs in the Urals Mountains.¹⁵ Similar pressure was exerted by the Kirghiz on the Ghūz, a nomadic people who already in the mid-eighth century, when the Qarluq had taken the Semirech'ye, had been displaced westward towards the Yaiyiq (Ural) River, beyond which lay the lands of the Pechenegs. In 893 AD, however, simultaneously with the Khazars they attacked the Pechenegs who were driven out of their "territory." The Pechenegs' lands were then occupied by the Ghūz. By the close of the prevailing phase of climatic change accordingly the lands of the Ghūz extended between the Irtysh, where the "Wooden Village" marked their frontier with the Kimäk,¹⁶ the Volga, the Caspian and Dih-i nau on the Jaxartes (Amu-



1. Nomadic Migrations in the Trans-Pontine Steppe, 840-1070

Darya), the winter residence of the Ghūz king.¹⁷ They even, when the river was frozen, raided across the Volga.¹⁸ Their new neighbours to the north- the Bashqirds – were accordingly forced to maintain constant patrols to prevent their encroachment into their territories. The Pechenegs¹⁹ driven out of their “territory” between the Volga and Ural rivers, settled in a new country located somewhere to the north of the Azov Sea, shunting its previous residents – the Magyars- westward to new lands called Atelkuzu (“between the rivers”) stretching between the Dnepr and Sereth rivers. Shortly before 900 AD, however, a new advance by the Pechenegs pushed the Magyars beyond the Carpathians. This allowed the Pechenegs to take possession of lands extending from a place opposite Distra²⁰ on the lower Danube in the west to Sarkel, the Khazar fortress on the Don in the east.

The collapse of Uyghur power on the Orkhon and their displacement by the Kirghiz had during the years 850-950 AD triggered a wholesale migration of nomadic people westward. In the north the Kimäk began to press on the eastern borderlands of the Rūs in the Urals Mountains. Further south a steady westward movement of the Ghūz brought them to the banks of the Volga, across which they raided, into the European steppe lands. The “knock-on” effects of these migratory movements were no less dramatic. The Pechenegs, driven out of their “territory” between the Volga and Ural rivers by the Ghūz, settled in a new country located somewhere to the north of the Azov Sea. From here they shunted its previous residents – the Magyars- westward to new lands called Atelkuzu (“between the rivers”) stretching between the Dnepr and Sereth rivers. Shortly before 900 AD, moreover, a new advance by the Pechenegs pushed the Magyars beyond the Carpathians. This allowed the Pechenegs to take possession of lands extending from a place opposite Distra on the lower Danube to Sarkel, the Khazar fortress on the Don. The political cosmology of the Trans-Pontine steppes was accordingly transformed. In the north the year 880 AD saw the Russian Principalities united by Oleg, the expansion of the vast new state proceeding all the more rapidly with the defeat in ca 860 AD of the Magyars by the Pecheneg Turks. The Pecheneg invasion, moreover, drove a wedge between the Khazars and their subordinate partners, the Magyars and Volga Bulghārs, and de facto ended Khazar dominance of the European steppe. In the ensuing struggle between the nomad Turks and the Russian Principality for control of the southern steppe, the Khazars played an increasingly unimportant part, although they did not finally disappear until about 1030 AD

The continuing southward movement of the prevailing weather-system during the years 950-1080 AD and resultant deepening of the climatic crisis in the Semirech’ye and Mongolian steppe threw the whole of that region into turmoil. To the north, the great empire of the Kirghiz lasted until ca 917 AD when the K’itai united under their aegis northern China and Mongolia. In Sinkiang equally fundamental political changes were taking place which signalled the demise of the existing Tibetan hegemony over the region. The focus of this threat to the Tibetan hegemony lay in the lands of Yaghmā. These were in the tenth century located in the Central- and Western T’ien-shan.²¹ In 943 AD the Yaghmā, at the head of a confederate army, including Chigil and Tukhsi, had conquered Balāsāghūn in the Chu valley and invaded Transoxania.²² As a result the resident Qaluq had then been merged into the new kingdom whose *Ordu-kand* (army cantonments) lay at Kāshgar.²³ By the reign of Satuq in the 990s the Yaghmā were waging war with the king of Khotan. The mention of their presence on the road between Kāshgar to Khotan at that time, moreover, may, be a portent of their final absorption of the latter place towards 1000 AD.²⁴ With the final submission of Khotan the Tibetans had finally been forced to retreat beyond their pre-800 AD frontiers. The Yaghmā, whose rulers now adopted the title Ilāk- or Qara-khans, established there hegemony not only over the Transoxanian lands north of the T’ien-shan but also over the erstwhile Tibetan possessions in the western Sinkiang and all along the new Tibetan frontier, south of the Tarim river. By 990 AD the Saminids of Mawara’an-nahr were hard pressed by the Qara-khanids and in 999 AD the army, led

by its Turkish-general, revolted, overthrew their Saminid master and seized the vacant throne-establishing the Ghaznavid dynasty (999-1055 AD). A new political order had been created in the lands of the Asiatic steppe.

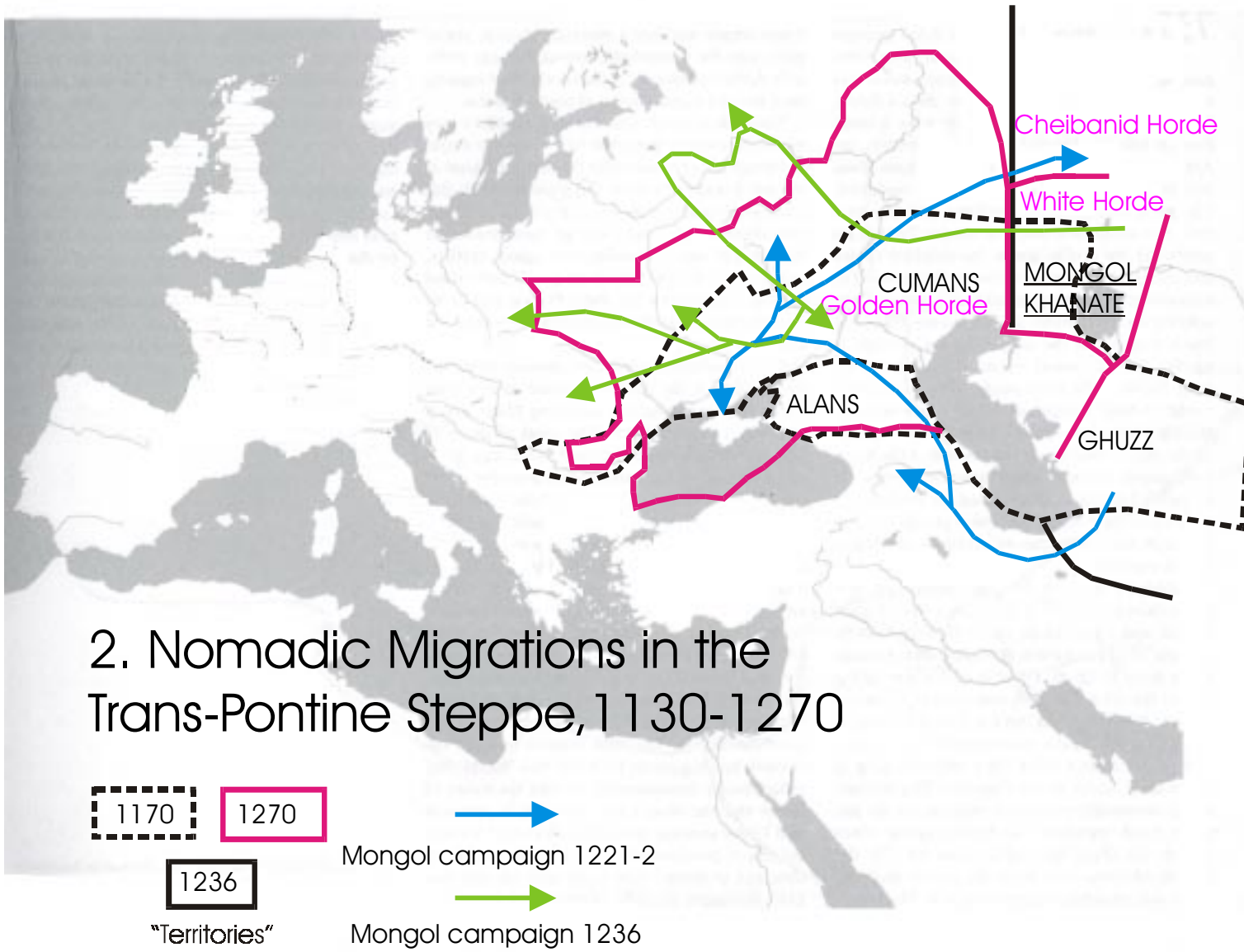
No less significant were the changes taking place in the Trans-Pontine steppes. At the close of the previous stage of the climatic-cycle in ca. 950 AD the Principality of Kiev (Kūyāba) had reached the apogee of its power, when it came to occupy the whole of the territory between the Danube and Don. The Kievan duke Sviatoslav then in 963 AD captured the Khazar fortress of Sarkel, before in 968/9 AD marching along the eastern shore of the Sea of Azov to the Caucasus and Itil and other Khazar cities where he defeated the Khazar army and plundered the country.²⁵ The Rūs subdued all the peoples on the river Itil (Volga) such as Khazar, Bulghār and Burtās. All the people of the town of Itil fled. Some went to the island of Bāb al-Abwāb (Derbend), others of them to the island of Siyāhkowīh in the Caspian Sea.²⁶ In the political vacuum created by the collapse of Khazar power, moreover, a diminutive Rūs settlement – Tmutarakan (Mařarha)- located in the vicinity of present-day Rostov-on-Don, replaced Samkird, becoming the military and commercial base of a new Rūs Khanate. It is most probably from this base that the Rūs, taking the road through the Don and Volga rivers, undertook their incursions on the coast of the Caspian Sea. In 987/8 AD they appeared near the town of Bāb al-Abwāb to support the Muslim āmir of the town against his opponents.²⁷ In 1030-1032 AD they attacked the Muslim principalities in Transcaucasia where they penetrated as far as Baku.²⁸ The impetus of Rūs expansionism thus continued, in spite of Sviatoslav's ignominious death in a Pecheneg ambush in 972 AD, but the onus of maintaining it passed on that occasion to the Rūs Khanate of Tmutarakan. The events of 972 AD however revealed the fragile nature of the Rūs "polity." It seems to have comprised little more than a loose confederacy, embracing in the mid-tenth century Novgorod, Kiev and Tmutarakan, which could trace its ancestry to the time of Oleg and Igor. As the deepening of the climatic crisis undermined the pastoral base of the northern Trans-Pontine steppe, moreover, internecine struggles tended to tear that "polity" apart. On the death of St Vladimir in 1015 AD the region descended into a state of internecine warfare. Peace was only achieved in 1024 AD by the division of the country between the princes of Novgorod and Chernigov-the latter also holding Tmutarakan- while the backwater of Polotsk retained its independence. Unity was ephemerally restored in 1036 AD when the prince of Chernigov died. It only lasted, however, eighteen years until 1054 AD during which time the principalities comprising the Rūs "polity" were theoretically ranked in a strict order, with the Great Principality of Kiev taking precedence and exerting a degree of overall control which varied with the personality of the incumbent. In such circumstances the "territory" of the Rūs fell prey to foreign incursions. Whilst the Rūs tore themselves apart, the Trans-Pontine steppe lands became the object of Byzantine imperial ambitions with the object of securing control over the Black Sea. Parallel with its elimination of the West-Bulghār "empire" in 1018 AD and the subjugation of the South Slavs on its North-western borders, Byzantium conquered in 1016 AD the Crimea, and in 1022 AD annexed the Armenian kingdom of Vaspurakan.

Far more ominous for both these Byzantines and the Rūs populations of the Trans-Pontine steppe, however, were the events of 1037 AD when a clan of mercenary Ghūz revolted from Ghaznavid employ. A new power – the Seljuk Turk- had been born. By 1055 AD they had expelled the Ghaznavids from Persia and had conquered the Buwayyids. Their appetite for war and conquest unabated, both the Byzantines, who were unable to prevent the loss of Transcaucasia, and the Fatamids, whose Syrian dependencies were invaded, watched their eastern frontiers with concern. Repeated raiding of Byzantine Armenia by the Seljuk Sultan, Alp Aslan, stimulated an Imperial response but in 1071 AD at the battle of Manzikert, in which the Rūs fought alongside the Imperial forces, the Byzantine army was totally destroyed. There was now no-one to oppose the Seljuk advance and only the Bosphorus saved the Empire, whilst the Turkish tribes, bypassing the Armenians

of the uninviting Taurus, flooded into Anatolia, filling the vacuum that Manzikert had created. The history of the Ghūz cannot, however, be monopolized by the story of the Seljuk clan's activities for in 1060 AD the main, heathen part, of the Horde moved into the Trans-Pontine steppe, pushing the Pechinegs before them and in 1068 AD defeating the southern Rūs princes. As the century drew to its close, the "Cumans", as the Ghūz were called by the Byzantines, destroyed Tmutarakan and their belligerence threatened the prosperity even more than security of the cities of the southern Trans-Pontine steppes.

The Climatic-Economic Cycle of 1130/70-1250 (Map 2). Then as the characteristic Central Asian summer low-pressure weather-system again moved northward during the years, 1130/70-1170, increased rainfall resulted in more verdant grass growth to Mongolia, the Semirech'ye and the Trans-Pontine steppe. At the same time there seems to have been a countervailing movement in the weather system of Khorāsān, as an environment of increased rainfall and vegetation growth progressively moved southward, bringing new life to the margins of the "Great Desert" (Dasht-e-Kavīr). In these circumstances the martial instincts of the nomadic peoples of the region - the "Cumans", whose "territories" extended from the Aral Sea to the Carpathians, and the Pechenegs on the Lower Danube before their destruction at the hands of the Byzantines in 1122, were curbed. They now engaged in a buoyant animal husbandry and active livestock trade and from reciprocal access to the "Great Silk Road" which during years 950/1030-1230 A.D. again passed due west from China, traversing through Mānisā (Turkmenia) and Tukharistan (northern Khorāsān). It then skirted the southern shores of the Caspian, before entering the eastern marches of the Byzantine Empire en route to Constantinople. At Tukharistan some merchants turned due south. After taking passage through one of the passes of the Hindu Kush, they arrived at the Indus Delta to lade their wares on ships bound for the Persian Gulf, from whence they were transported either across Mesopotamia to Armenia and Byzantium or to the Red Sea and Egypt. Amongst these traders' wares, however, there was now but little Central Asian silver. With the collapse of mining production there they carried gold, which, as the debasement of the Transoxanian coinage fostered a major eastward export boom, flowed from China to Central Asia, and from thence was transported either south to India or west to the Caliphate and Byzantium. At Byzantium by ca. 1085 A.D. supplies of such gold were sufficient for the Emperor Alexius I to once more mint a restored nomisma – the hyperpyron (= "pure"). This enjoyed a wide circulation not only in the lands of the truncated Empire but also in the lands of the Pechineg and "Cuman" beyond.

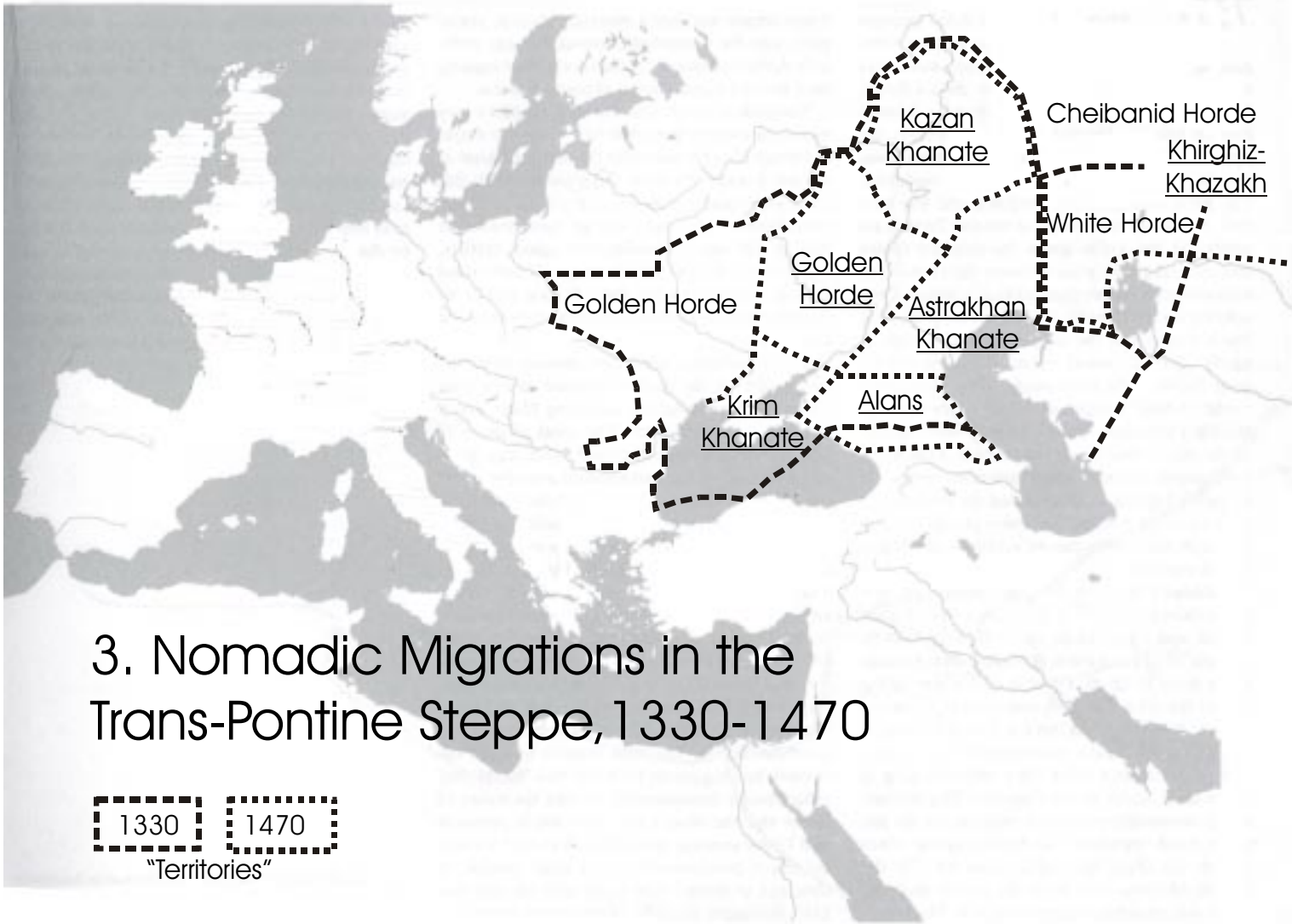
When, however, during the years 1170-1250/70 the characteristic Central Asian summer low-pressure weather-system again moved southwards, diminished precipitation resulted in an increased aridity in Mongolia, the Semirech'ye and the Trans-Pontine steppe. At the same time there seems to have been a countervailing movement in the weather system of Khorāsān, as an environment of declining rainfall and vegetation growth pervaded the margins of the "Great Desert" (Dasht-e-Kavīr). Once again this resulted in the development of internecine struggles for the available sparse grasslands of Mongolia and, at the beginning of the thirteenth century the emergence of a new power there, the creation of the Mongol chief, Temujin, who fused the warring tribes into a formidable fighting machine. This was initially deployed to make in 1211-1213 deep incursions into China and to undertake in 1217 the annexation of the Kara-Khitai Khanate. Then in two merciless campaigns in 1220 and 1221 he smashed the Khwarizm Shahdom. During this latter war, moreover, he detached a corps under Subutai and Chepe westward, which utterly defeated Georgians, Alans, Cumans and the south Russian princes in 1221-1222. On Temujin's death in 1227 these latter gains were abandoned. His "empire", which stretched from Korea to Persia, however, continued intact and from this base yet another campaign was mounted in 1236 by Ogotai Khan westward. One after the other the Volga Bulgars



(1237), the great Principality of Vladimir (1238), the Cuman and Alan (1239) and the south Russian principalities (1240) were overrun. Then the Mongol Army split in two. The northern force defeated the Poles and the Teutonic Knights, the southern the Hungarians; but no permanent conquest was made as the Mongols withdrew on the death of their Khan. Disputes arose over the succession and Batu led the army back to their old base on the Lower Volga in the winter of 1242/3. From here he held sway over the wide steppes of the “Cumans”, which became his camping grounds, whilst the various Russian princes became his tributaries, de facto independence of the “Golden Horde” becoming de jure on the death in 1259 of Möngke Khan. Thereafter, as climatic amelioration produced a verdant grazing in the lands of the “Cuman” Steppe, successive khans, Bereke (d. 1265), Mangu Timor (d. 1280), Toktu (d.1313) and Uzbeg Khan’s reign (1313-1340) and his son Janibeg (1340-1357), were able to maintain their overlordship over the Golden Horde. Its constituent tribes continued to pasture the whole territory of the Volga-Don between the Caspian on the south and the town of Ukek located on the former border of Bulghar, a territory contemporaneously occupied by Chuvashes, Cheremises, Votiaks and Mordvins, on the north. As such the horde continued to form a unitary whole at least until ca. 1360.

The Climatic-Economic Cycle of 1335/60-1437/86 (Map 3). Then, as local disputes over grazing rights wrought internecine tensions and a new spirit of independence amongst the constituent khanates the whole edifice fell apart, opening the way for Timur’s invasion of these lands. His expeditions in search of plunder and fame, in 1387, 1389 and 1395, wrought havoc in the lands of the western steppe and the wholesale displacement of their inhabitants by members of the ‘White Horde’ passing westward in the wake of the conqueror. Yet he never established a sufficient presence in the region to prevent his victims from subsequently rebuilding the shattered polities. From ca. 1411 there was a return to the status quo ante. The horde was reconstituted under the overlordship of Ulugh Mohammed, son of Hassan Oghli one of the begs of the ‘Golden Horde’ who had declared his independence in ca. 1369/72. He now proved capable of not only imposing his rule at the rebuilt Serai but also of establishing until 1437 his overlordship throughout ‘Tartary’. As in later times of climatic amelioration the years ca. 1411-1437 marked a period when peace returned to the steppe and, as indigenes assumed a more sedentary life-style they ephemerally established tillage in more favoured areas of the region. They also fostered a major commerce in livestock: horses were traded to Persia whilst oxen passed during these years from the steppe, either through Poland or Moldavia-Walachia to Germany, and from thence to Italy beyond.

Then, once again from ca. 1437-1486, as local disputes over grazing rights wrought internecine tensions and a new spirit of independence amongst the constituent khanates, the whole edifice fell apart. A misguided attempt by Ulugh Mohammed to dissipate these tensions by encouraging foreign adventures, moreover, merely served to accelerate the descent into anarchy. Dispatching one Nurus son of Idiku to liase with his rival Kuchuk Mohammed in a southern campaign, he created a formidable fighting force. This force, having marched on Astrakhan and then proceeded by way of the Don steppe to the Sea of Azov, returned to Serai where they defeated their overlord, allowing Kuchuk Mohammed to displace his erstwhile master. The reality of the new ruler’s position as head of the ‘Golden Horde’ was, however, very different from that of his predecessor. His true power base, and subsequently that of his family,²⁹ was largely restricted to Serai-Astrakhan, two of the six autonomous khanates which came to dominate the steppe at this time. Ulugh Mohammed, following his defeat in 1438 laid the foundations of another. Fleeing before his conqueror he sought Lithuanian protection in present-day Tula before again traversing the country, to pass through the lands of the Mordvins and settle at Kazan, where he ruled until his son Mahmudek murdered him in 1446. This act of patricide again served to throw



the newly-reformed khanate into turmoil. Civil war prevailed. Mahmudek successfully secured his position and that of his family.³⁰ Two of his brothers, however, were forced to flee to Cherkask and Muscovy, becoming staunch allies of the Russians and in 1452 acquiring Gorodetz on the Oka in Ryazan where they formed the small independent Kasimov khanate.³¹ To the south of this khanate there was another at this time, occupying the lands between the Dnepr and Don, which was ruled over by one, Seyid Ahmed (ca. 1438-1455), son of Tash Timur and brother of Hadj Girai, who introduced the Nogais to this region and Europe. Here the khan and subsequently one of his sons, Maniak, with their allies pursued a glorious but relatively short course before the horde was extinguished in the 1470s, its remnants together with its erstwhile Nogais allies henceforth becoming assimilated into the Astrakhan horde. The lands on the right bank of the Don which they vacated were now incorporated into the 'territories' of the Serai-Astrakhan hordes who at this time wandered from steppe to steppe, sometimes on the borders of the Dnepr, sometimes in Circassia near the Kuma river. With the descendents of Ulugh Mohammed fully occupied in the North, the Serai-Astrakhan hordes during the closing years of the second climatic-economic cycle had once more established their hegemony over the steppe. They even actively intervened into the affairs of the last of the independent hordes born of the fifteenth-century recession - the Krim tartars. This independent khanate, the creation of Hadj Girai a son of Tash Timur and nephew of Ulugh Mohammed,³² due to internal politics, played little part in the changes taking place on the steppe to the north during the years ca. 1437-1486. Under its founder, who was little more than a protégé of Vitovt of Lithuania and after his death in 1430 a faithful friend of his successors Ladislav and Casimir,³³ the khan's attention was primarily focussed on the Crimea, then a Genoese possession, to the south of the horde's grazing lands. On occasion, as in 1442, this involved him in military posturings³⁴ but normally during his reign (d. 1466) and those of his sons (Nuraulet, 1466-9 and 1473-4; Mengli Girai, 1469-1473, 1478-1485) manoeuvrings, within or outwith the prevailing Genoese polity, sufficed to achieve their objectives. By the accession of Mengli Girai this polity had long before established a stable form. Kaffa was governed by a consul sent annually from Genoa who administered the colony with the help of two locally-elected councillors. The neighbouring district was, however, ruled by four judges. They were subject to an official appointed by the khan. It was through this latter post, accordingly, that the khan exerted his influence within the Crimea and, as events in 1474 were to prove, it was also a post through which external influence could be brought to bear on the affairs of the region. In that year the incumbent of the office, Mamai, had died, setting in motion a tri-partite struggle for control. In the event the incumbent's son, Seidek, was elected to the post but not for long. Almost immediately the khan's brother Haidar removed Seidek from office and blockaded Kaffa, seizing two Genoese vessels on their way to raise the siege of the city.³⁵ Yet even as negotiations were underway in relation to this bi-partisan struggle it was submerged in world politics. In the next year Eminek and his partisans, who had been supported as candidate by the khan before being dropped in favour of Haidar's protégé Kara Murza, acknowledged Turkish suzerainty, prompting an invasion of the Crimea. The capture of Kaffa was quickly followed by the fall of Sudak, Balaclava and Inkermann.³⁶ Tana, a mart of the Venetians, was pillaged and razed and Mengli was transported to Constantinople.³⁷ The political order was transformed. Previously the Tartars were suzerains of the Genoese but not occupants of the Crimea: their camps were located outside of the peninsula, the chief one being near Perekop. Now they reigned supreme over both the peninsula and the steppe. During the subsequent decade, however, that control was more nominal than real. In 1476-8 Ahmed of the 'Golden Horde' managed to insert one of his nephews, Janibeg, on the throne of the khanate, and even though the latter was then expelled by Mengli, in 1485 the Crimea was once again overrun by the troops of the 'Golden Horde.'³⁸ In spite of the dramatic events of 1474-5, which were chronicled all over Christendom, the Krim khanate was in reality only a marginal

player in the events, which during the years from ca. 1437-86 were transforming the economy of the trans-Pontine steppe.

Throughout the period ca. 1437-86 as enhanced aridity resulted in increasingly sparse grazing a new spirit of independence pervaded the khanates of the steppe. Each ruler attempted to extend the nomadic wanderings of his horde, and, as peoples encroached on each other's "territories", increased martial activity ensued which soon evolved into an economic pursuit in its own right.

For most of this period Seyid Ahmed and Kuchuk Mohammed dominated the increasingly sparse steppe grazings. In 1434 they ruled conjointly therein under the overlordship of the khan Ulugh Mohammed and from 1438 maintained co-operative but independent lordships over their lands, which marched together along the line of the Don. Their positions within these territories were largely unassailable. In 1455, however, Haji Girai intercepted Seyid Ahmed, returning from a raid towards Podolia. He was defeated and forced to retire. The great khan was then handed over by his Lithuanian 'friends' to the Poles who imprisoned him at Kovno. He died miserably there in that year.³⁹ In the power vacuum created by the death of Seyid Ahmed the other hordes now tried to gain advantage. The incursion of the Krim Tartars in 1455 developed in the 1460s into a protracted struggle on the banks of the Don between Haji Girai and Kuchuk Mohammed's successor, Ahmed khan. This conflict was further complicated in 1472 by the intervention of Daniyar, the son and successor of Kasim the founder of the Kasimov khanate. In 1474-6, however, internecine struggles in the Crimea removed any threat from that quarter.⁴⁰ Accordingly, it was Ahmed khan who carried the day. During the closing years of his rule and in the reigns of his sons the lands on the right bank of the Don, which had been vacated on the disintegration of the western horde, were incorporated into the 'territories' of the Serai-Astrakhan hordes. Its members at this time wandered from steppe to steppe, sometimes on the borders of the Dnepr, sometimes in Circassia near the Kum. The aestival wanderings of the Great Horde each year, as Contarini described in 1476, dispatched them far and wide in search of fresh pasturages, the range of their nomadic migrations extending from Astrakhan towards the confines of Russia. Inevitably such regular interactions between Tartars and Muscovites in the grazings of the frontier lands could often lead to misunderstandings and disorder which could rapidly escalate into major disturbances and even outright war. Regular disorders were thus intermittently interrupted by major military campaigns as the Tartar forces of both Seyid Ahmed and his son Maniak and Kuchuk Mohammed and his successors swept over the lands of Muscovite, Lithuanian and Pole. In the North their incursions focussed on the line of the Oka and particularly on Ryazan which was attacked by Kuchuk Mohammed in 1437-8, 1442, 1445, 1449, 1455 and by his son Ahmed in 1460, 1467, 1471 and 1480-1. On occasion, however, penetration went far deeper into the Muscovite lands. Thus in 1450 Kuchuk Mohammed, having taken the line of the Oka, passed on into Moscow province advancing towards Kolomna before being defeated and deflected towards Podolia. In the next year the initiative passed to Seyid Ahmed who dispatched his son Masofsha north on an expedition which reached Moscow in July where the suburbs were fired before the force again retreated into Podolia. Nor did the death of Seyid Ahmed in 1455 stay the operations of the western horde on the northern frontier. In 1459 Tartars of this horde crossed the Oka and again advanced on Kolomna. Against a background of endemic tensions on Muscovy's steppe frontier the region experienced approximately one year in four a major Tartar incursion. A similar situation prevailed in the West where the hordes' incursions were focussed on Podolia. The province was directly attacked by the western horde of Seyid Ahmed and his sons in 1438, 1445, 1453, 1455 and 1457 and indirectly in 1450 and 1451 received the attention of Kuchuk Mohammed and Seyid Ahmed respectively after expeditions directed by them to Muscovy were deflected thence. Once again on occasion these raids penetrated far beyond Podolia: in 1445 and 1451 they attained Lemberg (Lvov) and in 1453 and 1469 they extended deep

into the surrounding Polish territories. On each of these occasions in both Muscovy and Poland-Lithuania, as the chroniclers relate, the Tartars secured quantities of booty, took high-ranking prisoners for ransom⁴¹ and acquired innumerable captives to be sold into slavery. The northern army alone in the campaign of 1453 seized 9,000 young men and maidens and 10,000 in that of 1469. As the returns to animal husbandry diminished during the years 1438-86 the denizens of the 'Great Horde' were thus able by their martial pursuits to achieve a cross-cyclical equilibration of incomes.

In these circumstances, whilst the denizens of both the western and eastern branches of the 'Great Horde' managed to stabilize their incomes, the members of the other khanates - Kazan, Kasimov and Krim - were marginalized and forced to evolve alternative strategies to ensure their survival. In the case of the Kazan khanate this involved an emulation of the behavioural patterns of the dominant hordes as Ulugh Mohammed exploited the opportunities opened up by incursions into the Muscovite lands from the South to further his own martial ambitions. In 1439 he marched on Moscow and although unable to take the city plundered the neighbourhood before moving on to Kolomna which he burnt before retiring. This show of force was seemingly sufficient for the khan to occupy Nizhnii Novogorod and its environs where he may be discerned overwintering in 1444/5 before mounting another major incursion in the spring of 1445. On this occasion he advanced on Murom from whence he dispatched two of his sons, Mahmudek and Yakub, to attack the Muscovites. Little was achieved in that year but in the next the Muscovite army was totally destroyed and the Grand Prince Vasili taken, the Tartars thereafter retiring with their illustrious prisoner to Kurmuish. As a result of this victory the Tartars of Kazan, whilst forced to cede Vladimir and Murom in 1446, were able for some twenty years to extend their grazing grounds. Each summer they migrated from their winter residence on the Volga to the bend of the Oka where, in the aftermath of the 1449-51 incursions from the South, the Russians stayed any further advance from the east by establishing the client Kasimov khanate. Excluded from access to the northern steppe by the annual northward migrations of the eastern branch the 'Great Horde', Ulugh Mohammed had from 1439-45 extended westward into the low undulating hill country between the Volga and Oka. Thereby he created a pastoral empire over which his son, Mahmudek, was to rule until his death in 1467. The survival of the khanate was entirely predicated, however, on its ability to hold these newly annexed lands against the Russians. When the latter, taking advantage of the internal disorders following the death of the khan, invaded and after three successive expeditions in 1467-9 managed to detach these territories from the grip of the khan it marked the beginning of the end. The Kazan Tartars might again take the initiative in 1478 when Ibrahim khan, son and successor of Mahmudek, invaded Vyatka but this merely revealed the contemporary weakness of the horde. It invoked a counter incursion by the population of Vyatka-Ustiug which burnt the villages on the Kama whilst another Russian force pursued a similar course as it advanced along the Volga to besiege Kazan. The climatic-economic cycle thus drew to its close. It was followed from 1486-1510 by a more pacific phase in Muscovite-Kazan relations. This was characterised on the whole by palace intrigues rather than military action. The Russians were able to install at Kazan their clients, Muhammid Amin (1487-96 and 1502-15) or his brother Abul Latif (1497-1502 and 1515-8) the last descendents of Ulugh Mohammed.

The strategies evolved in the Kasimov and Krim khanates in response to the establishment during the years 1438-86 of the hegemony of the 'Great Horde' over the steppe were quite different to that of the Kazan khanate. When in 1446 his son Mahmudek murdered Ulugh Mohammed, two of his other sons, Kasim and Yakub subsequent founders of the Kasimov khanate, had fled to Cherkask. From thence they had passed to Muscovy where from 1446-1452 they entered directly into the service of the Grand Prince, receiving his pay and deploying their forces in his service against Muslim and Christian alike. With the establishment of the Kasimov khanate in 1452 this relationship did not change, although

under both Kasim (1452-69) and Daniyar (1469-86) subsidies replaced pay as the reward for their services. Nor was the situation very different in the Krim khanate. Haji Girai, the founder of the dynasty, was again a protégé of the Lithuanian king Vitavit and after his death in 1430 a faithful friend of his successors Ladislav and Casimir. He made war and peace at their behest and was suitably rewarded with subsidies for his actions against the 'Great Horde' on their behalf.⁴² His successors Nurdaulet (1467-9) and Mengli Girai (1469-1473) at least initially followed in the same course. The events of 1474-5, however, totally altered the political alignment of the horde. It was now, as a feudatory of the Sultan that Mengli Girai resumed the office of khan (1478-1485). Once again, however, on his investiture the terms of his service were defined: in the case of war the Sultan would pay 120 purses for the khan's guards and 80 for the Kapikuli muras, provide all provisions for the Tartar contingent and allow them to keep any booty they made.⁴³ Subsidies were thus made once again a major element in the income of the denizens of the khanate.

Throughout the period ca.1437-86, therefore, as enhanced aridity resulted in increasingly sparse steppe grazing, each ruler therein had attempted to extend the nomadic wanderings of his horde. The prize of establishing a hegemony over the steppe grazing fell to the 'Great Horde' and each year its constituent peoples and their flocks and herds took passage from their winter quarters at Azov and Astrakhan-Serai to summer grazing on the banks of the Dnepr and Oka respectively. Inevitably such regular interactions between the Tartars and their westerly Lithuanian-Polish and northerly Muscovite neighbours in the grazing of the frontier lands lead to misunderstandings and disorder. These soon escalated into martial activity which was pursued as an economic pursuit in its own right, yielding the nomads quantities of booty, high-ranking prisoners for ransom and innumerable captives to be sold into slavery. As the returns to animal husbandry diminished the denizens of the 'Great Horde' were thus able by their martial pursuits to achieve a cross-cyclical equilibration of incomes. In the process they also provided the environment for the marginal khanates of Kazimov and Krim to develop new survival strategies, supporting falling pastoral incomes with subsidies from Muscovite or Lithuanian-Polish rulers intent on employing these hordes as a countervailing force in their defences against the 'Great Horde'.

ENDNOTES

¹ Tooke, W., *View of the Russian Empire during the Reign of Catherine II and to the Close of the Present Century* (London, 3 vols., 1799), I, pp. 40, 51

² Coxe, W., *Travels into Poland, Russia, Sweden & Denmark* (London, 2 vols., 1784), I, p. 478.

³ Tooke, W., op. cit., I, pp. 41-3 and Coxe, W., op. cit., I, p. 477

⁴ Clarke, E D., *Travels in Various Countries* (London, 3 vols., 1810), I, p. 212.

⁵ *Memoirs of Baron de Tott containing the state of the Turkish empire and the Crimea during the late war with Russia with numerous anecdotes, facts and observations on the manners and customs of the Turks and Tartars.* Second edition to which are subject the strictures of M de Peyssonnel. Translated from the French in two volumes (London, 1796), (henceforth de Tott's *Memoirs*), I, pp. 349-52.

⁶ Pinkerton, J., *Modern Geography* (London, 2 vols., 1802), I, pp. 323-4

⁷ Clarke, E D., *Travels ...*, I, pp. 246-7.

⁸ E. Whalen, *Report für Meteorologie. Dritter Supplement* (St Petersburg, 1886), p.187; *World Weather Records*, Smithsonian Institute, Washington DC., USA. I should like to express my gratitude to Dr Jennifer Newman for affording me access to materials provided by Professor H H Lamb and the members of the Climatic Research Unit, University of East Anglia concerning post-1750 data. A correlation of this direct evidence with scattered information contained in contemporary works concerning climatic relatives and with

the evidence of tree rings, moreover, affords the opportunity to extend this series backwards in time. On this latter approach see the articles of Professor Schvedov, "Les' kak' letopis zasukh", *Meteorologicheskii Vestnik*, V (1892) and D Mendeleev, "Izmereniya derev' i drugiya danniya o prirost lesov' v ural'skikh krayakh" in D Mendeleev (red.), *Ural'skaya zheleznaya promishlennost' v 1899 g.* (St Petersburg, 1900), p.24 and M. Chernavskaya, "Botanical Indicators of the Little Ice Age in the Russian Plain" in *Proceedings of the International Symposium on the Little Ice Age* (Tokyo, 1992)

⁹ Blanchard, I "[The Medieval World of Islam: an Environmental and Economic Analysis](#)", paper presented at IMC, Leeds 2001 also found in the same author's *Mining Metallurgy and Minting in the Middle Ages* (Stuttgart, 2001), volume 1, chapter 3.

¹⁰ On the so-called "Little Ice Age" and subsequent *rechauffement* see E Le Roy Ladurie, *Le climat depuis l'an mille* (Paris, 1967) and for a discussion of these secular trends in a Russian context see the article of L G Polosova and Yu S Rubinshtein in *Izvestiya Akademii Nauk SSSR, seriya geograficheskaya*, V (1963), pp. 3-28

¹¹ This section is based, unless otherwise stated, on materials contained in the monumental H H Howorth, *History of the Mongols from the 9th to the 19th Century* (London, 4 parts in 5 vols., 1878-1927)

¹² Throughout this section the successive phases of climatic cycles, delineated on the basis of data outlined above, are indicated in the following manner: the indication of the period of amelioration (e.g. 1335/60) is followed by the terminal date (e.g. -1411) of the phase of deterioration.

¹³ V. V. Bartold, *History of the Semirechyé*, p.15.

¹⁴ *T'ang-shu*, translated by I. Bichurin, *Sobraniye svedeniy*, I, p. 424.

¹⁵ *Hudud al-'Alam*, § 5/19.

¹⁶ *Ibidem* § 6/42, 18/5.

¹⁷ *Ibidem* § 26/29; Ibn Hawqal, *Surat al-ard*, p.393.

¹⁸ Mas'udi, *Muruj al-dhahbab*, II, p.49.

¹⁹ C. A. Macartney, "The Pechenegs," *The Slavonic Review*, VIII (1929), pp.342-353.

²⁰ *Distra=Durustulum=Silistria*.

²¹ *Hudud al-'Alam*, § 6/21.

²² Nizam al-Mulk, *Siyasat nama*, edited Schefer, p. 189.

²³ Sir A. Stein, *Ancient Khotan*, pp. 47-72.

²⁴ *Hudud al-'Alam*, § 9/18, 11/20.

²⁵ G. Vernadsky, *The Origins of Russia* (Oxford, 1959), p.274.

²⁶ Ibn Hawqal, *Surat al-ard*, II, pp. 393-4.

²⁷ V. Minorsky, *Istoriya Shirvana i Derbenda* (Moskva, 1963), p.21.

²⁸ *Ibidem*, p.23

²⁹ Kuchuk Mohammed, who was the son of Timur khan former ruler of Kipchak, reigned over the combined khanates from ca. 1438-1460. He was succeeded by Mahmud Khan and Ahmed Khan, the latter ruling from Serai until his assassination in 1480, the former controlling the lower Volga whilst three of his nephews - Kasim, Janibeg and Abdul Kerim, sons of Mahmud - ruled Astrakhan.

³⁰ Ulugh Mohammed ruled the Kazan khanate from ca. 1438-1446 and was succeeded by his son Mahmudek (ca. 1446-1465) and then by his grandsons, Khalil khan and Ibrahim khan (d. 1479). Turmoil after the death of Ibrahim khan between his son Ali, Ilham khan and his step-brother Muhammed Amin again weakened the khanate for as the former seized the throne his rival fled to Moscow where he became embroiled over the years 1482-7 in intrigues which ultimately led in 1489-1496 to his ruling in the khanate as a protégé of the Russians.

³¹ This khanate also remained in the hands of this branch of the Kazan family into a second generation being ruled over by the founder's son Daniyar in the 1470s before passing in 1480 to the refugee Nurdaulet, renege brother of Mengli Gerai, who was in

turn succeeded in ca. 1487 by his son Satilgan and the latter's brother Janai in ca. 1506/8.

³² Von Hammer, *Golden Horde*, pp. 399-400; M. Veliaminov Zernov, *op. cit.*, I, n. 44.

³³ M. Veliaminov Zernov, *op. cit.*, I, n.21.

³⁴ Stritter, III, p.1189; De Bohucz, *Histoire de la Tauride*, p.331.

³⁵ De Bohucz, *Histoire de la Tauride*, pp. 333-5.

³⁶ Karamzin, VI, p.107.

³⁷ M. Veliaminov Zernov, *op. cit.*, I, n.48

³⁸ *Nouvelle Journal Asiatique*, xii, 353-5; Barbaro, *Hakluyt Society*, p.30

³⁹ Von Hammer, *Golden Horde*, pp. 397.

⁴⁰ De Bohucz, *Histoire de la Tauride*, pp. 335-6.

⁴¹ For example Maria the wife of Prince Vasili Obolenski in 1449 and members of the house of Ohsha and the landgrave Mrozko in 1452.

⁴² M. Veliaminov Zernov, *op. cit.*, I, n.21.

⁴³ Peyssonnel, II, 228-230; Langles, 403-6

