

THE ORIGINS OF SLAVONIC : LANGUAGE CONTACT
AND LANGUAGE CHANGE IN ANCIENT EASTERN
EUROPE AND WESTERN EURASIA

Noel Christian Brackney

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Thesis submitted for the requirements of the degree of

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Table of Contents

Declaration i

Abstract ii

Abbreviations iii

Illustrations v

Acknowledgements vii

Chapter 1: Introduction 1

Chapter 2: Theoretical Parameters 11

- 2.1 Introductory Remarks 11
- 2.2 From Early Philological to Neogrammarian Theories of Language Change 15
- 2.3 The Neogrammarian Approach to Language Change 21
- 2.4 Structural and Generative Linguistics 23
- 2.5 The Object of Study 33
- 2.6 Definition of Terms 37
- 2.7 Interdisciplinary Approaches to Language Change 43
- 2.8 Language Change 46
- 2.9 The Ontogeny of Linguistic Change 52
- 2.10 The Function of Linguistic Change 55
- 2.11 The Mechanisms and Phylogeny of Linguistic Change 55
- 2.12 Phonological Mechanisms 56
- 2.13 Morphological Mechanisms 58
- 2.14 Syntactic Mechanisms 62
- 2.15 Towards a Phylogeny of Change 63
- 2.16 Macromechanical and Micromechanical Linguistic Change 65
- 2.17 Lack of Concrete Divisions with the Hierarchy and Mechanisms of Change 66
- 2.18 The Actuation of Change 69
- 2.19 'Critical Mass' and the Punctuated Equilibrium Model 76
- 2.20 Linguistic Contact 86
- 2.21 The Role of Context in Linguistic Change 90
- 2.22 Summary 92

Chapter 3: History 94

- 3.1 Introduction 94
- 3.2 Environmental Factors 104
- 3.3 The Neolithic to the Early Bronze Age 110

- 3.4 The Middle Bronze Age, the Late Bronze Age, and the Classical Period 117
- 3.5 The Cimmerians 124
- 3.6 The Scythians 126
- 3.7 The Greek Colonies 130
- 3.8 The Sarmatians 132
- 3.9 The Early Slavs: Some Preliminary Remarks 133
- 3.10 The Early Slavs: Review of Primary Sources 134
- 3.11 The Early Slavs: Archaeological Evidence 141
- 3.12 Review of Traditional Assessments of IE Expansion and Consolidation 153
- 3.13 The Demic Diffusion Model 160
- 3.14 The Pre-Proto-Indo-Europeans, Proto-Indo-Europeans, and Slavs 172
- 3.15 Summary 185

Chapter 4: Language 188

- 4.1 Introductory Remarks 188
- 4.2 10,000 Years BP: Pre-Proto-Indo-European 192
- 4.3 The Grammatical Structures of Pre-Proto-Indo-European 205
- 4.4 6th Millennium BCE-5th Millennium BCE: From Pre-Proto-Indo-European to Proto-Indo-European 217
- 4.5 The Significance of the PPIE-PIE Typological Shift 220
- 4.6 Transitional (Early Proto-Indo-European) Phonetics and Phonology 221
- 4.7 Transitional Morphology 227
- 4.8 Transitional Lexicon 230
- 4.9 5th Millennium BCE-3rd Millennium BCE: Proto-Indo-European 231
- 4.10 Proto-Indo-European Morphology 238
- 4.11 3000-2000 BCE: Balto-Slavonic 244
- 4.12 Balto-Slavonic Phonetics and Phonology 247
- 4.13 Balto-Slavonic Morphology and Syntax 251
- 4.14 2000 BCE-1000 CE: Proto-Slavonic and Common Slavonic 253
- 4.15 Proto-Slavonic Phonology 258
- 4.16 Syllabic Synharmonism and Rising Sonority 261
- 4.17 Common Slavonic Phonology 274
- 4.18 LCS Dialect Areas 280
- 4.19 Elimination of Diphthongs in Liquid Sonorants 281
- 4.20 Development of Palatalized Dental Stops 285
- 4.21 The Evolution of the *Jers* 286
- 4.22 Proto- and Common Slavonic Morphology and Syntax 287
- 4.23 Lexical Borrowings into Proto- and Common Slavonic 293
- 4.24 Summary 299

Chapter 5: Conclusion 301

Bibliography 309

Declaration

(i) I, Noel Christian Brackney, hereby certify that this thesis, which is approximately 70,000 words in length, has been written by me, that it is the record of work carried out by me and that it has not been submitted in any previous application for a higher degree.

date 31/03/04 signature of candidate

(ii) I was admitted as a research student in September, 1998 and as a candidate for the degree of Doctor of Philosophy in September, 1999; the higher study for which this is a record was carried out in the University of St Andrews between 1999 and 2004.

date 31/03/04 signature of candidate

(iii) I hereby certify that the candidate has fulfilled the conditions of the Resolution and Regulations appropriate for the degree of Doctor of Philosophy in the University of St Andrews and that the candidate is qualified to submit this thesis in application for that degree.

date 16/4/04 signature of supervisor

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Abstract:

This thesis attempts to analyze the causes and mechanisms of the dissolution of the language ancestral to the modern Slavonic languages. Recent advances in the field of archaeology have cast traditional theories of the Indo-Europeanization of Europe into doubt; specifically, consensus has been growing that the Indo-European languages arrived in Europe several millennia earlier than previously thought, accompanying the introduction of agriculture into Anatolia, the Aegean, and the Balkan peninsula at the end of the Neolithic period. This stands in contrast to the conventional premise that Proto-Indo-European was introduced during the Bronze Age by nomadic tribes from the steppes north of the Caucasus mountains.

Acceptance of the former model requires significant adjustment in the chronology of the break-up of Indo-European unity. In addition, it necessitates the adjustment of current theories of the origin and spread of change within a language. We have attempted to address this issue by the proposal of a framework of language evolution incorporating the Utterance-Based Theory of Selection and the Punctuated Equilibrium Model. Both of these models rely on research in the field of sociolinguistics, and stress the role of external factors in the development of languages.

Our tentative conclusion was that there exists a concrete and dynamic relationship between catastrophic historical events and episodes of profound change in the structure of a language. The body of this thesis is composed of historical, archaeological, and linguistic evidence, which substantiates this claim.

Abbreviations

BP	Before Present
BSI	Balto-Slavonic
BCE	Before the Common Era
CE	Common Era
CSl.	Common Slavonic
Cz.	Czech
EPIE	Early PIE
FVP	First Velar Palatalization
Gk	Greek
IE	Indo-European
I.I.	Indo-Iranian
LCS	Late Common Slavonic
LOS	Law of Open Syllables
L. Sorb.	Lower Sorbian
LPIE	Late PIE
Mod.	Modern
OESl	Old East Slavonic
OCS	Old Church Slavonic
PIE	Proto-Indo-European
PPIE	Pre PIE
Pol	Polish

PSl.	Proto-Slavonic
Rus.	Russian
Slk.	Slovak
SVP	Second Velar Palatalization
TVP	Third Velar Palatalization
U. Sorb.	Upper Sorbian
Uk.	Ukrainian

Illustrations, Figures and Tables

(page numbers follow entries in brackets)

- 3.1: Chronological outline of the history of Eastern Europe and Western Eurasia (103)
- 4.1: The Indo-European Language Families (193)
- 4.2: PIE chronological strata (196)
- 4.3: Proto-Kartvelian Consonantal Inventory (199)
- 4.4: Modern Abkhaz Consonantal Inventory (199)
- 4.5: Mathematically calculated IE *Stammbaum* (204)
- 4.6: Active Language Structure (210)
- 4.7: PPIE Consonantal Inventory (214-215)
- 4.8: Origins of PIE Vowels (222)
- 4.9: PIE Ablaut (224)
- 4.10: Ablaut alternations preserved in OCS (225-226)
- 4.11: Consonantal inventory of EPIE (226)
- 4.12: *Centum-satem* reflexes (236-237)
- 4.13: Indo-Iranian, Baltic and Slavonic phonological similarities (241-242)
- 4.14: Consonantal inventory of BSI (247-248)
- 4.15: Slavonic reflexes of the RUKI rule (249)
- 4.16: Consonantal inventory of PSI (260)
- 4.17: Vocalic inventory of PSI (260)
- 4.18: Elimination of word-final consonants (263)
- 4.19: Elimination of consonant clusters (264)
- 4.20: Morpheme boundary shift (265)

- 4.21: Semivowel prothesis (265-266)
- 4.22: First Velar Palatalization (267)
- 4.23: Various reflexes of jotation (268)
- 4.24: Hard v. soft consonants (269)
- 4.25: Elimination of diphthongs in /j/ and /w/ (270)
- 4.26: Backing of /ē/ after 'soft' consonants (271)
- 4.27: Vocalic inventory of ECSl (272)
- 4.28: Second Velar Palatalization (276)
- 4.29: Third Velar Palatalization (276)
- 4.30: Resolution of /tl/ and /dl/ (277)
- 4.31: Resolution of /aRC/ sequences (282)
- 4.32: Reflexes of /CirC/ and /CuRC/ sequences (283)
- 4.33: Reflexes of /CeRC/ and /CaRC/ sequences (284-285)
- 4.34: Evolution of /t'/ and /d'/ (286)

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Chapter 1: Introduction

A continuous source of challenge for historical linguists attempting to shed light on the pre-modern development of language is the incomplete data with which we often work. Although scholars who study the languages of Ancient Sumer, Egypt, China, and Greece are privileged to have access to the oldest remaining texts in the world--dating back to the late 4th millennium BCE in the case of Sumerian and Egyptian, and the mid-2nd millennium for Chinese and Greek Linear B--for the vast majority of the world's languages, the written records are much younger. In the case of the Slavonic languages, the earliest literary monuments in a Slavonic language date to the mid-9th century CE (although the earliest extant manuscripts date to the late 10th century). Therefore, the investigator interested in plumbing the depths of the history of Slavonic must cast his net further, i.e. into other areas of academic inquiry relevant to the topic of language change, in order to flesh out the picture of the origins and evolution of the Slavonic language family/ancient Slavonic languages.

In his 1967 article entitled 'Internal and External Factors in the Development of Slavonic Literary Languages' Robert Auty remarked,

Such an approach [i.e. analyzing a language taking into account only internal linguistic factors] yields valuable and satisfying results when we are dealing with languages of distant periods, with the language of non-literate or semi-literate communities, or with the reconstruction of languages spoken in periods for which we have no written record...When,

however, we are dealing with languages recorded in recent centuries, where we are familiar with the whole social and historical background, the purely internal approach must be supplemented by considerations of a different character. (1)

Auty's position expressed the prevailing view among linguists of his time. Numerous gains had been made in the reconstruction of various proto-languages, especially the ancient Indo-European (a term coined by Thomas Young in 1914) languages and in turn their ancestor, which was dubbed Proto-Indo-European. Investigations had been carried out in this area since Sir William Jones' famous speech in the 18th century.

However, despite much speculation by various luminaries in the field regarding the ancient homeland, culture, religion, and history of the various Indo-European peoples, one trend that emerged was an inability to make any significant, definitive links between the history of the languages and the history of the peoples themselves. Many handbooks of PIE contained a section on culture or mythology, but many of the scholars of the late 19th and early 20th centuries lacked a sufficiently large corpus of data to make statements regarding the origin and spread of the IE languages that would stand the test of time. The same might be said of the historians of the time.

Several notable ideas and accomplishments did emerge, though. Among these were the Comparative-Historical Method of language reconstruction, which provided

the basis for most of the work in historical linguistics that goes on today. The reconstructed lexica and grammars of PIE and its various daughter languages were also signal accomplishments. If various points have been debated and accepted or rejected subsequently, this has only served to refine our knowledge of ancient or poorly-attested languages. In addition to these, relative chronologies of grammatical and lexical changes were produced, as researchers were able to delve further and further into the origins of various languages. Simultaneously, an ever-increasing body of archaeological work was unearthed, some of which had direct bearings on the study of the history of languages. One of the most notable discoveries was the library of Hattusas in Turkey (modern-day Boghazköy), which provided an extremely rich trove of texts in the heretofore unattested Hittite language, as well as some other languages, of whose existence scholars had previously been ignorant. Importantly, the Swiss linguist Ferdinand de Saussure had earlier proposed the existence of a certain class of phonemes, for which no direct evidence survived in any of the IE languages. The validity of his hypothesis was definitively confirmed once Hittite was deciphered and determined to have been an IE language; it was the only one to have retained this class of sounds. This was, and still is, considered to have been a remarkable demonstration of the power of historical linguistic methodology to accurately reconstruct early stages in the evolution of languages.¹

The above-mentioned phenomena served as the initial stimulus for our own research. The idea of the relative chronology of language change has always been most intriguing; more precisely, when and under what circumstances would

¹ See §4.6 for a detailed account of Saussure's laryngeal theory.

contemporary scholars be able to establish absolute chronologies for the languages they were investigating? This has proven to be an exceedingly thorny question, which has required a major reappraisal of conventional historical linguistic theory and methodology.

Ultimately, our line of inquiry relates back to dissatisfaction with statements such as Auty's. Other disciplines within the social sciences and humanities, such as history and archaeology, have been reaping the benefits of an increased amount of raw data, as well as a substantial increase in the precision and accuracy of research facilitated by the numerous scientific and technological advances that have been made in various fields over the last half century. Scientific discoveries in fields as diverse as geology, genetics, chemistry and biology have contributed much to a better understanding of the events and peoples of the past. In the past, there was much exchange between philologists, historians, and archaeologists. Even if the results such an exchange of ideas produced were often inaccurate or misleading, it fostered an environment of open and vigorous inquiry. In recent decades, though, it is our opinion that there has been some stagnation in the area of historical linguistics. Investigations into the origin and development of languages, i.e. diachronic studies, became rather unfashionable as a new emphasis on such topics as language acquisition, synchronic variation, and perception and cognition emerged. While these are all valid and necessary areas of research, requiring serious and concerted examination, the older questions relating to diachronic change and variation have hardly been put to rest. If historians and archaeologists are able to shed new light on

the peoples of the past with the aid of new technologies and methods, is it fair to assume that historical linguistics might benefit from the same advances?

It is our belief and hope that this is very much the case. In particular, certain advances in the field of archaeology would seem to have a direct bearing on the study of the evolution of the IE languages. There has been much debate over the last decade and a half regarding the peopling of Europe in ancient times. The consensus for much of the last two centuries has been that this took place through a series of waves of migration of distinct tribes of varying size. This stems from a) accounts of chroniclers of the Classical and Medieval periods, who described numerous highly destructive barbarian invasions of their nations, and b) an interpretation of material remains excavated from prehistoric, Classical, and Medieval settlements, cemeteries, and other sites of human occupation or industry. The relationship that scholars established between these two types of sources was highly reciprocal. This was not entirely unfounded, as there are numerous examples of modern-day scholars, armed with ancient narratives, who have discovered hitherto lost groups of people and/or places. Notable examples include the discoveries of Troy by Heinrich Schliemann, of the Norse colonies in Newfoundland by Helge Ingstad, the Mycaenean and Minoan sites unearthed by Arthur Evans on Crete, and numerous Mesoamerican sites. These are only a few of the many successful archaeological expeditions that have uncovered secrets of the past.

When excavating such sites and cataloguing material and physical remains, conventional theory held that particular ethnic groups were represented by particular types of behaviour or techniques of manufacturing artefacts. These tendencies were labelled 'cultures' to reflect this. Cultures were identified based on funerary practice, the types of tools, weapons, and decorations a group produced, especially pottery, their distinctive artistic preferences, and architecture and patterns of settlement, to name a few. Much speculation was extrapolated based on the material remains of a group of people, including hypotheses detailing religious beliefs and practice, social structures, etc. Furthermore, when a written account of a group was available, the physical evidence was invoked to substantiate the accuracy of the document. Building on this evidence, other scholars attempted to correlate these cultures with specific ethnic groups and languages, either as documented in ancient sources, or reconstructed on the basis of linguistic evidence. Of special relevance to the work at hand is the view that the speakers of PIE invaded Europe from the steppes north-east of the Black Sea beginning ca. 4400 BCE.

An increasing number of archaeologists disputes this theory. They have drawn on evidence provided by geneticists and specialists in paleobotany and human geography, and have come to the conclusion that such a scenario was all but impossible. Their argument hinges on the view that the pre-modern populations of the Asian steppes were simply not large enough to effect the near-complete replacement or displacement of the indigenous population of Europe, the Near East, and Northern India at this time. The geographical range over which IE languages were spoken in the Bronze and Iron Ages would require just such a massive linguistic

replacement process. An alternative point of view was provided by Colin Renfrew, who argued that the only event that could have allowed such a wide dispersal of one language family in ancient times was the introduction of agriculture into Europe during the Neolithic, and the subsequent development of pastoralism as an adaptation to ecological conditions on the steppes.

Although this model was vigorously rejected by a number of prominent scholars, such as the late Marija Gimbutas, J. P. Mallory and others, subsequent modifications have helped it to gain wider currency, both among archaeologists and linguists. The implications of this theory for the study of the IE languages are profound. The chronology of the ultimate disintegration of PIE into over a dozen daughter languages has been effectively doubled, and this requires a re-evaluation of our traditional paradigms of language change, which were informed to a great extent by late 19th and early-mid 20th century interpretations of archaeological and historical evidence. While there are some who reject Renfrew's theory out of hand because it requires the admission that the ancestors of various IE peoples were present in Europe or Asia much earlier than thought, it is our opinion that a model can be developed which adequately accounts for this increased time depth.

However, as we wish to avoid the mistakes of the past, namely the proposition of a theory based on a misunderstanding of historical events, a key requirement of any hypothesis must be that it is supported by reliable linguistic, archaeological, and historical data. While any branch of the IE language family could be chosen as a case

study to aid in the development and testing of a hypothesis of linguistic evolution, the history of the Slavonic languages is, we believe, particularly well-suited to an exercise such as this. There are several reasons for this. First, the Slavs remained outside of the awareness of the Mediterranean and Near Eastern civilizations for much of recorded history. It was only comparatively recently that they began to expand out of their ancestral territories and exert an influence on the history and politics of Europe and Central Asia. That being said, the Slavonic tribes were close enough to the epicentres of the ancient civilizations so that the mutual impact of this cultural contact was both well-documented and profound. Another key factor in the choice of the Slavs was the unique geographical position that this group occupied. They are thought to have resided in a territory that was more central than their Baltic neighbours to the immediate north, and thus were in contact with a larger number of foreign groups from an earlier date. Basically, the greater the amount of contact with other groups, the more potential data we have on which to base a theory of language change. Conversely, it will be argued that the very isolation of the Slavs from their southern neighbours, as well as the colder climate and more heavily-forested terrain they occupied, resulted in a higher degree of cultural and linguistic conservatism.² If we have access to documents from, for example, Hittite, Greek, and Sanskrit that provide evidence for various linguistic archaisms, the higher degree of conservatism displayed by the Slavonic languages might have resulted in similarly archaic constructions or lexical items that survived to a later date. These factors make Slavic an ideal candidate for a case study in a modified theory of linguistic change.

² This topic is explored in §3.2.

The body of this work consists of three main sections. In Chapter 2 we advance a theory of language change based on the results of recent archaeological and linguistic research. As noted above, we believe that traditional theories of language change are unable to fully and adequately account for the events of the past as reconstructed by archaeologists and historians. This theory draws on several important developments in the areas of sociolinguistics and historical linguistics, and attempts to provide a coherent framework for the study not only of the history of Slavonic, but of language change and variation in general. Chapter 3 contains a presentation and discussion of the aforementioned historical and archaeological work, both traditional and recent. Together, Chapters 2 and 3 provide the framework for the actual analysis of the changes which took place during the long history of the Slavonic branch of the IE language family, which is presented in Chapter 4. To substantiate the claims set out in the second and third chapters as fully as possible, we have chosen the reconstructed Pre-Proto-Indo-European language as a starting point for our discussion. The transitions from PPIE to PIE, and from PIE to Proto-Slavonic, and then to Common Slavonic provide evidence to validate our claims regarding the origins and mechanisms of change within languages. The endpoint for this discussion is the fragmentation of Late Common Slavonic. Historically, it was during this time that the various Slav nations began to consolidate, and adopt the religious and cultural institutions of their neighbours. After approx. 1000 CE at the very latest, one can no longer discuss linguistic events that were common to all areas of the Slavonic speech community, so the analysis becomes much more complex. Each branch of Slavonic began to pursue its own unique course of development, and the evolution of each was shaped by unique historical factors. Chapter 5 provides a summary of the research

presented in the body of this work, and presents our conclusions based on examination of the data.

Chapter 2: Theoretical Parameters

2.1 Introductory Remarks

Many Slavists have traditionally considered themselves at a disadvantage compared to colleagues who study the early history, language, or culture of peoples such as the Greeks, Romans, or Indo-Iranians. Several scholars have commenced their books by bemoaning the paucity of written records either by or about the Slavs or Slavonic to a greater or lesser degree.

In this quest for a genealogy the Slavs find themselves in a less fortunate position than many other members of the Indo-European family of languages.' (Schenker, Dawn of Slavic, 1.)

The early history of the Slavic nations is full of tragic incidents [...] owing to the varying circumstances and events beyond control of the Slavic rulers. In this respect, the Germanic peoples were more fortunate since they had appeared on the European scene several centuries earlier. (Dvornik, 2.)

[...T]he scholar used to the richer evidence from western Europe at this period may feel that this [i.e. written and archaeological sources dealing with Eastern Europe] is not very much. (Barford, 3.)

The tacit ranking of the value of a language to the study of Indo-European or historical linguistics as a whole based on age and quantity of literary monuments is

not new, and reflects the biases of 18th and 19th century philology, i.e. the almost exclusive reliance on Greek, Latin, and Sanskrit to provide evidence in support of, and confirmation of theories with parenthetical reference to other, relatively less well-documented early Indo-European languages; in essence, an overly deductive attitude. While this is certainly an antiquated standpoint, as borne out by numerous subsequent studies and discoveries, vestiges of this outlook seem both persistent and pervasive, as evidenced by the passages cited above.

Such points of view have a somewhat constraining effect on current scholarship. The self-imposed disadvantage historians and linguists set due to the relative youth and scarcity of written records is but one stumbling block, and perhaps the least challenging to overcome. The study of the many branches of the Indo-European language family has shed much light on numerous aspects of the history of these languages, which were previously very poorly understood, and the Slavonic languages are among these.

While the lack of early sources detailing the culture and language(s) of ancient Slav tribes certainly provides a challenge to the historian, linguist, and archaeologist; this 'literary vacuum' does not minimise the value of existing sources. As Saussure noted,

[...A]insi le lituanien, attesté depuis 1540 seulement, n'est pas moins précieux à cet égard que le paléoslave, consigné au x^e siècle, ou même que le sanscrit du Rigvèda... Dans ce sens, on pourrait dire que le lituanien du xvi^e siècle est plus ancien que le latin du iii^e siècle avant l'ère. (296)

What hampers the efforts of inquiry into the history of Slavonic most is arguably overly strict adherence to the methodologies that lie at the heart of historical linguistics: Neogrammarian, Structuralist and Generative linguistics--the most dominant schools of thought in the discipline during the 19th and 20th centuries. More precisely, exclusive reliance on them as the definitive paradigms for any and all historical linguistic inquiry implied that if one cannot classify and describe a language or language family with reference to its genetic origins and abstracted, idealized grammatical structures, or manipulate existing evidence to conform to formalistic rules, then the discussion was of little scholarly value. It would seem that the time has come to take the findings of the past in new directions. The persistent problems that scholars have been facing do not necessarily have to elude solution forever. What is needed at this stage is a new model, one that draws on the evidence of the past while remaining flexible enough to allow for the importing of perspectives and data from other, related disciplines, which can deepen our understanding of issues heretofore poorly understood. Of specific relevance to the work at hand is the origin, and to a lesser extent, the spread of language change, which lie at the core of historical and sociolinguistics. Because historical linguists, by definition, examine languages of the past, and sociolinguists are concerned with, among other things, language variation and interaction among groups (either within or between speech communities), the origin and spread of change within a language or group of languages is of fundamental concern to both disciplines, not to mention a project combining both sociolinguistic and historical linguistic methodology and data.

It must be stressed that without the insights provided by the early philologists and Structuralists, historical linguistics as a whole, and Slavonic historical linguistics specifically, would not have advanced to the state that they have. This is not to maintain that the investigator does not require a certain amount of distance in order to achieve objectivity and a clear understanding of larger phenomena which may be at work in a given speech community at a given time. Therefore it is a valid undertaking to examine the tendencies of a speech community as a whole. To concentrate on the idiosyncrasies of a particular individual's speech would skew the data and produce misleading results. In short, we must carefully balance our inquiry, lest it become either overly inductive, or overly deductive.

Along the same lines, languages seem to display certain common tendencies, regardless of their location in space or time (the Uniformitarian Principle; see below, §2.6). Furthermore, certain aspects of language (and human behaviour in general) display a regularity and predictability that is best described in terms of generalizations and principles. We do not advocate the abandonment of the methods or findings of past scholarship; merely the more judicious selection and use of methods and materials. Each has an arena to which it is appropriate. To argue otherwise is to do a disservice to both the model and those who developed it. What follows is a brief examination of pertinent aspects of the aforementioned models, and a brief critique of each, followed by an attempt at restriction and integration, in order to provide a more holistic framework for examining the origin and spread of changes throughout a language.

2.2 From Early Philological to Neogrammarian Theories of Language Change

In many ways, the birth of the academic discipline of linguistics is to be found in questions regarding the origin of languages and the factors that influenced the development of the modern languages with which we are familiar today, sporadically posed since the Middle Ages, yet most forcefully and rigorously raised beginning in the 18th century. One of the most often-cited events in the history of the field is the paper delivered by Sir William Jones in 1786 to the Bengal Asiatic Society, from which the following passage is taken.

The Sanskrit language, whatever be its antiquity, is of a wonderful structure; more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either, yet bearing to both of them a stronger affinity, both in the roots of verbs and in the forms of grammar, than could possibly have been produced by accident; so strong indeed, that no philologer could examine them all three, without believing them to have sprung from some common source, which, perhaps, no longer exists.

(McMahon, 4.)

Jones was certainly not the first individual to be concerned with such matters, but his paper served as the impetus for a renewed, scientific inquiry into the origins of the Indo-European languages, and their relationships to each other.¹ Jones' work

¹ Much earlier speculation on the origins of languages leaned heavily on literal interpretations of the Bible, and subsequent attempts at a chronology of the history of the world, and was based on such

ultimately was the progenitor of the work of many of the most noteworthy of the historical linguists of the next century: Jakob and Wilhelm Grimm, Franz Bopp, August Schleicher, and others. The work of Schleicher is especially relevant to the task at hand, as it was his *Stammbaumtheorie*, ('Family Tree Theory') which was to have an enormous impact on historical linguistics, even to the present day.

This Family Tree model has enjoyed wide use since Schleicher published his work Compendium der vergleichenden Grammatik der indogermanischen Sprachen in 1861-2. The model, which is among the first topics introduced to beginning students of historical linguistics, illustrated the descent of the Indo-European languages from an initial postulated Proto-Indo-European stage to the modern diversity of languages. The ordering of the descendants and their relationships to their 'genetic' forebears is based on evidence gathered from the application of the Comparative Method, and internal reconstruction.

This method is fundamental to the study of the history of languages. It entails the comparison of lexical items and grammatical constructions of two or more languages in order to establish common ancestry based on regular sound changes (Anttila, Introduction 229-263). Or, in the case of internal reconstruction, evidence is gathered only from within the language under scrutiny.² Without delving too far into a peripheral discussion of the entire history of Indo-European studies, it is safe to state that the *Stammbaum* and the Comparative Method represented a watershed, not only

events as the fall of the Tower of Babel and the repopulation of the Earth by Noah and his sons after the Great Flood.

² For examples of basic application of the Comparative Method and Internal Reconstruction, see McMahon, ch. 1, Campbell (Historical Linguistics), ch. 5.

within the then-young field of historical linguistics, but also for scholarly inquiry as a whole. Where the problem lies was in the fact that the model has been over-generalized.

As one prominent scholar of the twentieth century noted, 'The earlier students of Indo-European did not realize that the family tree diagram was merely a statement of their method: they accepted the uniform parent languages and their sudden and clear-cut splitting as historical realities.' (Bloomfield, 311)³. This statement in and of itself did not reduce the value of the Family Tree as a starting point for new areas of inquiry. If we could use the model less frequently, yet in a more precise manner, then we could also eliminate a large degree of error from subsequent theorization, avoiding some of the more simplistic and inaccurate conclusions of the early philologists.

Another difficulty arose from over-reliance on the *Stammbaum* model: the diagram itself mirrors a biological schema of the descent and ordering of species in the natural world⁴. Indeed, Schleicher himself was quite intrigued by pre-Darwinian ideas of biological evolution, and this was strongly reflected in his work, both in the illustration itself and in the text of his work. This early idea of the evolution of organisms, however, has been discredited by modern research in the natural sciences. In brief, according to the model to which Schleicher adhered, species evolved from a lower to a higher state over time, i.e. evolution was *progressive*. He and many of his

³For further critique, see Dixon, ch. 4.

⁴ See Koerner, E. F. Konrad. 'The Natural Science Background to the Development of Historical-Comparative Linguistics.' Aertsen and Jeffers, 1-25. for a fuller discussion of the impact of the natural sciences on historical linguistics.

contemporaries either viewed language as evolving from a primitive, and therefore less sophisticated state, to a higher level, gradually approaching perfection, or conversely, having achieved a state of perfection or near-perfection at some point in the past, thence becoming more degraded with the passage of time.⁵ In language, this was demonstrated by the change from the richly inflected morphology of the past, to the isolating languages of the present day, e.g. French, Italian, etc. There are several difficulties with this attitude. First, on the conceptual level, their ideas of evolution (of languages or species), failed to take into account the idea of natural selection, where numerous mutations may occur between generations, but most either provide the individual with neither advantage nor disadvantage when seeking to reproduce, or are deleterious, and remove the individual organism from the reproductive cycle. The same could be said of language; numerous 'mutations' occur in the speech of a given generation, but so few of these achieve wider currency that they end up having no effect on the language as a whole whatsoever. As far as 'deleterious mutations' in language go, these might be viewed as utterances which impede the transfer of information between speaker and listener, and are thus corrected or abandoned.

There are numerous examples in nature of seemingly redundant or entirely counterproductive traits in the animal and plant world; nevertheless, the bearers of these continue to thrive, despite the difficulty their genetic inheritance has endowed them with. The same could be said of language; at any given point, there are aspects

⁵ Note that this is also reflected in a prevalent attitude towards history at the time: Classical civilization was the apex of human social development, and subsequently, with the fall of Rome, society had become increasingly decadent and barbarous.

of a language which are not the most expedient modes of communicating information, but which remain in the 'gene pool' for hundreds or sometimes thousands of years.

So, the traditional application of methods need to be modified to reflect subsequent findings. To quote Robin Dunbar,

To do so [i.e. posit questions emphasizing only the structure of language with no regard to its functions] is the equivalent of describing in minute detail the mechanical structures of a motorcar, but refusing to ask either how cars came to be there or what they are used for. (92)

Furthermore, the *Stammbaum* model is static. It illustrated neither the relationships between Indo-European languages and non-Indo-European languages that were either co-territorial with, or adjacent to, groups speaking Indo-European languages, nor did it reflect relationships which developed between languages in genetically distant, but geographically proximate branches of this family.⁶ An example of a relationship of this type would be that which existed between Slavonic and Iranian languages. They are not in direct genetic relation to each other, i.e. scions of the same immediate node on the Family Tree, but due to geographical contiguity in the distant past, they have influenced each other to some extent.⁷ Implicit in the

⁶ This was a problem recognized almost immediately upon the emergence of the *Stammbaum* model; Schleicher's student Schmidt published his own model, the *Wellentheorie*, in *Die Verwandtschaftsverhältnisse der indogermanischen Sprachen* (1872) which, while discounting the descent of the individual sub-families, more accurately represented the relationships between them. Note however that this model suffered from the same limitations of its predecessor: it is static. Nevertheless, from a conceptual standpoint, it complemented the Family Tree well, showing a more organic representation of the relationships between the various branches than either illustration could depict on its own.

⁷ E.g. the often-cited word for 'deity' or 'god', which is thought to have been borrowed by Slavonic from Indo-Iranian: *bog* in Sl., from **b^hag-* in I-I. (Schenker, *Dawn of Slavic*, 159.)

traditional Family Tree is the idea that one language divided into one or more others, and ceased to exist in the process. Compare, though, Colin Renfrew's view:

There is the expectation of regional as well as temporal variety within 'Proto-Indo-European', which is a term no longer to be seen as describing a single linguistic entity, but one which refers rather to the complex series of changes in different regions and periods, both in Europe and in western Asia, between the earliest Anatolian Pre-Proto-European (or Proto-Indo-Hittite) on the one hand, and the earliest languages for which we have actual documentation in each region on the other.' ('Time Depth, Convergence Theory, and Innovation', 260.)

Thus, rather than view each stage of the development of the Indo-European languages (or any other family of languages) as linguistically homogeneous, we would be better served to work with the assumption that there was a certain amount of linguistic diversity, which although largely unrecoverable, nonetheless had an impact on the history of different regional speech varieties. Anttila argued in favour of such an assumption of diversity. 'There is no language without variation...And variation does not manifest itself only in sound, but in all areas of language.' (Introduction, 47), Later in the same work, he remarked that '[v]ariation is a prerequisite of change, and regular change is a prerequisite of the Comparative Method [...]' (53.)

Certain changes were common to all areas, but this does not automatically mean that the dialects in question were identical. Such a revision of the term 'Proto-Indo-European' (and for that matter 'Proto-Slavonic' and 'Common Slavonic') will have profound effects on any hypothesis of language change; the picture has become much

more complex even at this early stage. Much of the evidence invoked to support this assumption of diversity comes from Anatolian IE. For example, the fact that the Hittite lexicon contained only approximately five hundred words of IE origin (Beekes Comparative Indo-European Linguistics, 45) is thought to be an indicator of an early isogloss between Anatolian IE and the 'mainstream' dialects. Also, Anatolian verbs were monothematic, whereas the remainder of the IE dialects were thought to have developed polythematic inflection. Note that some investigators consider the opposite to have occurred, i.e. that the Anatolian IE languages were originally polythematic and subsequently were simplified due to convergence with other non-IE Anatolian and Near Eastern languages.⁸

2.3 The Neogrammarian Approach to Language Change

The term 'Neogrammarian' refers to a school of linguistic thought which developed in reaction to the attitudes outlined above. Centring in Leipzig in the early 20th century, the Neogrammarians are best known for their slogan 'sound laws suffer no exceptions' (Osthoff and Brugmann, 1878, from Campbell, Historical Linguistics, 18), which was in stark contrast to their colleagues, whose slogan was 'each word has its own history.' (Gilliéron, 1918, and Malkiel, 1967.) It was the Neogrammarians (Paul, Brugmann, Osthoff, etc.) who tackled the problems of language change and evolution using as their base unit the phoneme. Furthermore, in seeking regularity across languages, the Comparative Method came into its own under the Neogrammarians. They posited numerous sound laws, all focussed on the distinctive

⁸ See §4.2 for a complete discussion of PPIE dialectal diversity.

phonological unit as the locus of change. Thus, it was regular, exceptionless, internally-motivated sound change that was at the root of the actuation and transmission of language changes. Such processes as lexical diffusion and analogy were the main sources of 'drift', which in itself was seen as a gradual process, whereby over relatively large amounts of time, languages evolved towards a more perfect state.

Here too, though, we run into difficulty with using evolutionary paradigms. In this instance, the Neogrammarians (like the Structuralists below), adhered to a teleological view of language change, i.e. that there was some sort of 'intention' underlying diachronic change. Or, stated differently, that languages tried to change in certain directions, in order to achieve certain results. Undoubtedly, when one change occurs that spreads throughout the entire speech community, this will prevent certain other kinds of changes from taking place (at least, temporarily). However, to argue that such events are somehow intentional is to ignore a fundamental fact: languages do not change themselves, rather speakers change languages. Therefore, barring instances of language planning, e.g. Old Church Slavonic, the vast majority of changes that occurred throughout the history of the Slavonic languages (and every other language family), while often influenced by the paradigms of the language itself, could not be said to have been motivated by the system. Although the Neogrammarians strengthened the foundation of diachronic linguistics, their working models and subsequent conclusions left much to be desired, especially when the results were applied to 'real world' scenarios. And although they were concerned with regularities across systems, their work was still atomistic in the sense that it

failed to integrate other mechanisms of change, which were independent of phonology.

Lastly, while certain types of change are in fact gradual—so-called therapeutic changes⁹, e.g. analogy, other models accurately demonstrate that the more profound types of change do occur quite rapidly. These will be discussed below.

2.4 Structural and Generative Linguistics

According to Structuralist and Generative linguistics, languages were to be viewed as self-contained systems, where each level in the linguistic hierarchy was defined in relation to those above and below it. Furthermore, the system as a whole, or individual levels within the system, were to be abstracted away from the actual repertoire of any given speaker, i.e. *reified*. This was because the language in question was not complete in any particular speaker. In addition, a speaker's actual linguistic output was not as important as the speaker's linguistic capability; Saussure referred to these two extremes as *parole* and *langue*. Later scholars, including Chomsky, described them as 'performance' and 'competence'. The former could never be considered an accurate or complete reflection of the latter.

Linguistic theory is concerned with an ideal speaker-listener, in a completely homogeneous speech-community, who knows its language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors

⁹ E.g. Aitchison, 169-182.

(random or characteristic) in applying his knowledge of the language in actual performance. (Chomsky, 1965, 3-4.)

The difficulty with using Structuralism, or more precisely, the exclusive use of Structuralist models to describe and delineate the study of a language or group of languages (whether by type or ancestry), lies in the intellectual foundations of the theory. Its two greatest flaws are its most notable hallmarks: reification of language, and a teleological view of language change, which was mentioned briefly with regard to Neogrammarian models.

Generative attitudes towards diachronic linguistics fell into the same trap, although the focus was somewhat different. Instead of being concerned with structures *per se*, the Generativists sought the underlying rules which regulated the output of any given speaker or speech community. Thus, a linguistic change was not necessarily to be viewed as a change in the elements composing the system, but a change in the ordering and behaviour of the system itself, i.e. a change in the *rules* (usually the syntax). Still, the problem remains essentially the same: languages operate, according to these models, independently of their speakers.

Thus, Structuralism, in its principal manifestations, used as its base unit the individual; it took as its starting point the individual languages and compared them one to another in order to establish a continuum of similarity, or it took the individual speaker, and compared his/her linguistic repertoire (phonetic, syntactic, etc.) to that of

other speakers. However, it simultaneously disregarded the individual by means of the distinction between competence and performance.

Adherents of both European and American Structuralism and Generativism have demonstrated that languages are in a constant state of flux (whether because of the constant interplay of various forces, e.g. *la force d'intercourse* v.. *l'esprit de clocher* [De Saussure, Cours, 281-285].), or the imperfect language acquisition of children (according to Generative models, the main cause of re-ordering of underlying grammatical rules, i.e., language change), and both seek to arrive at concrete, generalized, and definitive conclusions by examining only one manifestation of a language at a given time. Furthermore, both have difficulty with an absolutely essential element of any study of language: that language is a 'social fact' (De Saussure, Course, 6.). The literature, from the outset, was rife with contradictions on this topic. Note both Chomsky, as well as De Saussure, op cit., but later, 'Grâce à eux, on ne vit plus dans la langue un organisme qui se développe par lui-même, mais un produit de l'esprit collectif des groupes linguistiques.' (Cours, 19.) ('[...L]anguage is not complete in any speaker; it exists perfectly only within a collectivity.' [14]). What then is meant by the terms 'perfectly' and 'collectivity'? The idea that a language is a self-contained hierarchy of systems (phonological, morphological, syntactic, etc.), which can only be meaningfully defined in reference to other, adjacent systems, is one of the core tenets of Structuralism. However, it must be emphasized that this is something of an abstraction; several 'systems' may exist within one speaker or community, and the lines dividing system from system are not always as discrete as they might appear in a dialect atlas.

Furthermore, here we have yet another attempt at integration of the evolutionary model from biology with an examination of language change and language variation. This is where the issue of teleology emerges—many prominent scholars working within a Structuralist framework e.g. Bloomfield, Jakobson, Weinreich, and others, subscribed, tacitly or otherwise, to the view that each internal change occurs to restore balance to a system and provide the impetus for the language's internally-motivated progress towards a more ideal state, e.g. more efficient, more expressive, etc.. Note here an important difference between the evolutionary paradigm invoked by the Neogrammarians and their predecessors, and the Structuralists and diachronic Generativists: the majority of the earlier historical linguists viewed evolution as a process, which not only led intentionally from point A to point B, but wherein point A was a state inferior to point B. This corresponds to a pre-Darwinian view of the evolution of species.

The concept of evolution called upon by the Structuralists and their intellectual descendants also viewed evolution as progressive, that is proceeding from point A to B through the mechanism of natural selection, but reserving judgement as to whether point A or B is superior. Here we must note two important things: firstly, that the idea of Natural Selection is recognized as a mechanism of change¹⁰, and secondly that the evolution of languages in their eyes was, nevertheless, teleological. Stated differently, just because the point to which a language was evolving was not 'superior' to its beginning point, did not preclude that the evolution was, nonetheless,

¹⁰ Note that although natural selection is now recognized, it was often mis-recognized as a *cause* of change, rather than simply a *mechanism* of change, i.e. natural selection operates on an element which already exists. It does not create the change.

motivated by some sort of active, system-internal principle of guidance. This, as we shall discuss below, although more sophisticated and accurate than its predecessor, did not quite hit the mark.

Additionally, that languages are not the isolated, impervious systems that some scholars would have us believe they are is validated by a map of any linguistic area one would like to choose. Let us take by way of example the European provinces of the Eastern Roman Empire between the fourth and eleventh centuries CE; during this period, portions of the dioceses¹¹ of Thrace, Macedonia, and Dacia were threatened or invaded outright by a succession of peoples from the north and east: Huns, Goths, Slavs, Bulgars, Avars, Magyars, and other smaller groups. Each group should not be understood as an ethnically or linguistically homogeneous entity. Combine these 'immigrants' with an already diverse indigenous population of Greeks, Illyrians, etc., and an extremely complex linguistic map rapidly emerges, as groups interact, assimilate to each other, and diverge due to social pressure or isolation (see Chapter 3 for a full discussion).

Therefore, where precisely did one language or dialect begin, and another end? True, if one takes the long view, it is rather apparent that Greek, for example, was spoken in a geographically restricted area¹²; however, as one moves out from the

¹¹ The term diocese refers to a division of the Empire, consisting of a number of provinces, which was put in place by the emperor Diocletian (r. 284-305), to promote political stability and defence. (MacKay and Ditchburn, 7).

¹² Actually, Greek continued to be spoken in numerous isolated coastal and urban enclaves. The 'barbarian' invaders tended to shun the coasts and establish themselves in the hinterlands, which were more familiar and conducive to their traditional semi-nomadic or agricultural lifestyles (Obolensky *Byzantium and the Slavs*, 31-32.).

centre of one particular Slavonic-speaking area, one is sure to notice more and more elements from neighbouring dialects in the Slavonic spoken in adjoining regions. At specific points, one would have noted that the language of a given individual or village would have been more X than Y, or vice versa, and if one travelled far enough, one would have arrived in an area where there was little mutual intelligibility among speakers of dialects of the same language. However, the gradations were probably very slight, until one reached the actual dialect boundary, and this in itself would vary, depending on what feature, e.g. the distribution of a certain phoneme, lexeme, construction, etc., one wished to use as the measurement of such boundaries. After mapping all the reconstructed isoglosses, the situation was far from precise; isoglosses did not necessarily coincide with each other.

If language resides 'perfectly' in a collectivity, then how do we define the collectivity? Secondly, whose speech habits and traditions are included, and whose excluded? Is there some sort of percentage, i.e. if a Slavonic speaker's language contains more than x% non-Slavonic features, then they are excluded from the Perfect Collective of Slavonic? In a period such as this, political instability made the situation even more fluid.

Another question is which elements are included in which collectives? Surely certain elements would have to be excluded from the Slavonic collective, and yet it is not beyond the realm of possibility that those items which are excluded are integral to the language of one (however small) subset of said collective. To argue from a

different standpoint, one can exclude features which are or were not 'Slavonic enough', but this is a value judgement, and betrays the biases of the researcher.

Once a feature achieves broad enough usage, its 'foreignness' evaporates as it becomes an accepted element of the linguistic repertoire of a particular community. Modern examples abound, and there is no reason to assume that the process was not active in ancient times, if perhaps on a more restricted scale.¹³ Denial of this becomes especially untenable for those who are seeking to describe and analyze undocumented languages—habits and traditions which antedate the idea of 'standard language' by anywhere from several centuries to several millennia.

We would argue that the 'competence' or 'langue' element, which according to the Generativists was the only valid object of linguistic inquiry¹⁴, is almost entirely irrelevant to an historical linguistic study. We are concerned with how people might actually have spoken, especially in pre- or recently-literate societies, how phonemes were realized, how they assigned case, number, gender, distinguished between past, present, and future events, how they counted, etc., not how they 'should' have according to an idealized, reconstructed version of how they may or may not have. Oddly enough, for those who claim not to be prescriptive, this seems tantamount to retroactive language planning. Perhaps this is harsh; the point is that linguists are often guilty of putting too much stock in the uniformity of reconstructed languages. If we must admit that our reconstructions can only ever be a gross approximation of how

¹³ The Uniformitarian Principle; see below, §2.16.

¹⁴ See above, §2.4.

a given language actually sounded at a given time, then we must remain firm to this guideline. Study of a language, at any point during its development, cannot be anything but incomplete without as thorough as possible a study of the history and culture of the people who were or are speaking it.

Thus, we cannot but fall short of our mark if we generalize elusive 'universals' out of a flawed model. While there is nothing inherently flawed in examining the tendencies of, and relationships between various languages and groups of languages, this is where we should stop. If we accept Thomason's assertion that

[...T]here are limits to what we can achieve with our historical methodologies—limits that are a direct result of the fact that we don't have full information about any historical linguistic situation [...] ('Coping with Partial Information', 495.),

this does not automatically preclude the need for continual re-evaluation of existing theories, nor the proposal of new ones.

Two final points on this matter are that historical linguistic work must emphasize variation between languages or stages in linguistic evolution over time, as well as space. It can be deceptively easy, especially if Structuralist methodology is employed, to adopt the *Stammbaum* as not just a model, but a definitive paradigm for historical linguistic studies. Shevelov's statement is well-taken: 'CS could not have been completely uniform: it certainly had its own dialects.' (2) The term Common Slavonic can, if care is not taken, cause a student to forget that variation is inherent to a speech community. It implies that all Slavonic was, at some stage, mutually-

intelligible. It accounts for the rapid rise of the changes which produced the ancestors of the modern languages, i.e. the mutually-unintelligible Early East Slavonic, Early West Slavonic, etc., as the results of 'system-internal dynamics', 'invisible hands' or, the sudden and inexplicable birth of large numbers of children who, for whatever reason, were not capable of learning 'perfect' Common Slavonic, and whose corruptions ultimately split the community linguistically.¹⁵ The attempt to explain the causation of linguistic change via child language acquisition is a hallmark of generative models in particular. Briefly, the argument is that as a child learns its native language, there is a paucity of stimulus, i.e. the child hears very little actual language use, and has to extrapolate to a large extent in the construction of its 'internal grammar'. Thus, there are many 'gaps' that are created by this process of extrapolation, so that the internal grammar of the child does not correspond to the internal grammar of its parents, siblings, etc. According to Generative scholars, this continuous process of approximation is what causes linguistic change. Or, to use Generative terminology, the continual rewriting of D-Structure rules leads incrementally towards change.

There are two problems with this view of change. First and foremost, it does not take into account the corrective forces of the community. That is, even from the very beginning of a child's linguistic development, their mistakes are corrected by those around them. Literacy and formal education can emphasize this further, although often there is a significant gap between the literary language and a speaker's native dialect. The second difficulty with this theory is that it tends to be emphasized

¹⁵ Op cit. Renrew, 'Time Depth', 18.

over more immediate, contact-induced sources of change. It is unclear at this point whether or not a language in complete isolation would change due to child language acquisition discrepancies or not. It would depend, we suspect, on the degree of isolation, more than any other factor. Nevertheless, the fact that isolated languages often show a very high degree of conservatism suggests to us that if child language acquisition plays any role at all, it is a very small one.

To return to the initial question, the second issue we have with Structural and Generative models of language change is that the working picture we have at present does not reflect any social variation. Indeed, it would be presumptuous to assume that even in a society of relatively low technological and social complexity, different codes and variants were impossible. Naturally, this statement refers to groups that had achieved a certain size and level of development. We refer mainly to groups of a 'tribal' nature, composed of several reproductive groups, with some interaction (perhaps neither regular nor frequent) with other groups in the same locale (Christian 33, Table 2.2). Again, we cannot make any concrete claims either way, but it would seem logical at this point to assume that if a given community has reached a certain size and attained a certain level of development, i.e. some social stratification, and an accompanying minimum level of technological development, i.e. reinforcing the appearance of some sort of social hierarchy, as well as a certain level of cultic or religious development, i.e. represented by a class of priests or healers, then this might have been mirrored by the emergence of different linguistic registers.¹⁶ For example,

¹⁶ The ancient pre-Christian religion of the Slavic tribes was as developed as that of any other group; their shrines and religious artefacts indicated a level of spiritual sophistication which could very easily have had the above-mentioned effect on the language. For descriptions of the religious practice of the early Slavs see Gimbutas (1971, 151-159); Jones and Pennick (184-191); and Puhvel (229-238).

often forms of speech associated with religious activities are 'institutionalized', i.e. those who use them view their purity and conservation as necessary for the integrity of the spiritual system as a whole.¹⁷ We are neither arguing for nor against the existence of diglossia within traditional societies. Indeed, often such groups develop extremely complex linguistic systems. Conversely, we have no proof that this was the case among the ancient Slav tribes.

2.5 The Object of Study

The task that we have undertaken aims to find the answers to two questions: first, 'How and why did Common Slavonic as a unified language cease to exist and become replaced by East, West, and South Slavonic dialects?', and second, 'Is there any theoretical model that can be generalized from these findings, and applied to other historical linguistic scenarios?'. Perhaps at first glance Slavonic does not seem a logical starting point for the search for the answer to the latter question, while most relevant issues relating to the former seem to have been settled. Nevertheless, answering the first question to any satisfactory degree entails at least a partial answer to the second.

By unified Common Slavonic, we mean the dialects of the Slavonic branch of the Indo-European family before the middle of the first millennium CE. Implicit in this statement are several things. First, we are imposing a somewhat arbitrary

¹⁷ Cf. the Vedic Sanskrit hymns, recorded only in the middle of the first millennium BCE, but preserved intact from as early as the second millennium BCE (Matthews Dictionary of Linguistics, 327-328), due to the requirement that priests memorize them by heart.

chronological division upon an entity about which we can make few irrefutable statements. Common Slavonic is a purely linguistic term, with few demonstrable correlations in the fields of physical or cultural history. Nevertheless, several notable events in the 'real world' can be demonstrated to have occurred contemporaneously with the 'Common Slavonic' period. It is one of our key arguments in this dissertation that certain historical events had a direct effect on the languages in question. Notable examples of such events were the development and spread of agriculture, the development of pastoralist nomadism, the subsequent dynamic between agriculturalist and nomadic groups in Eurasia, and the Christianization of Europe.

Furthermore, when we say 'Common Slavonic', we can point to a certain reconstructed state of the language, itself still further divisible, and simultaneously part of an organic continuum. Essentially, we are dealing with a relative linguistic chronology that can be summarized thus: Late Proto-Indo-European → Balto-Slavonic → Early Proto-Slavonic → Late Proto-Slavonic → Early Common Slavonic → Late Common Slavonic → Early East, South, and West Slavonic, etc. Of course, this is an extremely simplified schema, and is only presented thus by way of introduction. As an organic, dynamic continuum, it is difficult, if not impossible, to draw precise divisions between each period. We do not maintain that each point above ceased to exist when it 'gave birth' to the next; another of our main arguments in the present work is that it is highly probable that different communities ceased speaking Late Common Slavonic dialects at different times.

A relatively long and linguistically uneventful period seems to have passed between the Proto-Indo-European → Proto-Slavonic split and the disintegration of Common Slavonic. Reconstructed evidence does indeed indicate that there were lexical, phonological, and morphological differences that developed and led from Proto-Slavonic to Common Slavonic (see below, §§4.14, 4.22, and 4.23), so the situation was not one characterized by complete inertia. Indeed, even these periodizations are misleading, as scholars have isolated subdivisions within both the Proto-Slavonic and Common Slavonic linguistic milieus (Schenker, Dawn of Slavic, 61-162). Nevertheless, we can certainly see that compared to neighbouring languages (especially to the south and west), which underwent more and increasingly profound changes within the same time frame, i.e. between the demise of Proto-Indo-European during the sixth millennium BCE¹⁸ and the Early Middle Ages, that the development of Slavonic was positively glacial. (This is, naturally, a relative statement. As late as the ninth century CE there was still a high degree of intelligibility between Balkan and Moravian dialects of Slavonic, which indicates, among other things, a slower rate of dialectal fragmentation, than that exhibited by Greek or Italic, for example. When compared with the Baltic languages, which were markedly more conservative, i.e. evolved at a slower rate, than Slavonic, such a statement would not apply.) What is most curious was the fact that during the bulk of this period, a state of relative linguistic 'equilibrium' existed¹⁹, until the expansion of the Slavic peoples into the 'civilized' world of Christendom, at which point (ca. 6th century CE-ca. 12th century

¹⁸ Quite a bit of controversy surrounds when exactly this occurred. The issue will be discussed in greater detail in Chapter 3.

¹⁹ Dixon (68-73). See below for further discussion.

CE) the forces of language change accelerated, and the histories of the individual modern Slavonic languages begin properly.²⁰

Another important limitation is geographical. Much debate surrounds the question of the precise location and geographical limits of the Slavonic homeland, and this is an important question for the study at hand. Not only in relation to the location of the Slavs themselves, but, as will be discussed below, also of primary importance to us is the location of speakers of other languages. We are not as much concerned with the Slavs in isolation, expanding out of their *Urheimat*, as we are with whom they met along the way. Furthermore, the geographical area under question will vary depending on the exact dates under discussion. Stated differently, the Proto-Slavonic period will entail reference to a smaller geographic area than the Late Common Slavonic period. In general, the total area in question is the vast expanse of territory between the Elbe and Volga rivers in the west and east, and the shores of the Baltic and the southern extremity of the Peloponnese in the north and south.

Returning to our main point, while we are primarily concerned with the latter half of the continuum, we must take into account events in the first half. They had a profound effect on the later events in the history of these languages, and reference will be made to them where necessary. For now, suffice it to say that the further back in time one goes, the less direct impact it will have on the current work. Nor are we overly concerned with the opposite end of the continuum. Therein lie the seeds for

²⁰ Cf. Lehr-Splawinski's (qtd. Birnbaum, *Common Slavic* 222.) description of two phases of prehistoric Slavonic; one longer and slower, the other more 'radical'.

much more material than we could hope to present accurately at the present time. Indeed, our main reason for choosing 'Common Slavonic' and its subsequent splitting was that it represents a manageable amount of data. Any earlier, and one rapidly enters the realm of greater speculation, and any later, and one must be prepared to discuss the unique histories of the individual 'modern' languages themselves.

2.6 Definition of Terms

Now that we have stated, in very broad terms, the object of our analysis, we must present the lens through which we intend to examine it. On the following pages, we present in systematic form a somewhat eclectic model for the analysis of the disintegration of Common Slavonic specifically, and language change in general. We wish to draw attention to two things at this point. First, and foremost, this is not to be understood as a rigid paradigm for the interpretation of linguistic history. If anything, it is a reaction against the excessively formalistic and constrained theories of Structural/Generative linguistics, and is meant only to serve as a flexible conceptual framework, which will allow for wider debate on the issues that we raise and the data which we present in support of our interpretations. On another level, it is an attempt to re-orient the focus of linguistic inquiry away from the individual (and often idealized) speaker or individual (and far too often idealized) grammar, and towards the interaction of groups.

At the same time as we are implying a more sociolinguistic approach to this work, we must emphasize that we simply do not possess the wealth of data, gathered

firsthand, that allowed such scholars as Labov, the Milroys, and Trudgill to produce such detailed work dealing with communities in Martha's Vineyard, New York, Philadelphia, Belfast, or Norwich in the twentieth century. We must remain mindful of, but not discouraged by the Historical Paradox, which states that

The task of historical linguistics is to explain the differences between the past and the present; but to the extent that the past was different from the present, there is no way of knowing how different it was. (Labov Linguistic Change I, 21.)

In order to adequately cope with the challenges posed by the Historical Paradox, a fundamental working hypothesis for the present study is that there are certain similarities between human communities, regardless of era, and that certain principles apply equally well to any group at any period. This is a variation of the Uniformitarian Principle, which Labov (*ibid.*) noted is fundamental to any historical linguistic study. First formulated in the nineteenth century by the geologist James Hutton, and later advanced by Charles Lyell, it states that 'knowledge of processes that operated in the past can be inferred by observing ongoing processes in the present.' (Christy, ix.)

This concept has enjoyed a long history in the discipline of linguistics, having been invoked since the 19th century.²¹ Obviously, this is an extremely powerful conceptual tool, and care must be taken in its application. With that caveat in mind, it

²¹ If not earlier; Max Müller identified a form of 'proto-uniformitarianism' in the work of the German scholar Gottfried Wilhelm von Leibniz (1646-1716) (Christy, 39).

is generally accepted that most (if not all) aspects of language display uniformity on some level. For example, Labov (Linguistic Change I) noted both that the physiological bases of language adhere to uniformity, as well as, to take another example from a different aspect of language, that the modern mass media have had no demonstrable effect in retarding sound change (23). Also, the relevance of the Uniformitarian Principle is evident from the fact that scholars have identified such things as sound laws, in addition to processes such as analogy, grammaticalization, not to mention processes like metathesis, juxtaposition, elision, and many others. Similarly, from the standpoint of an archaeologist or historian, one can speak of processes such as *Élite Dominance*, *Sedentary-Mobile Boundary Shift*²²,

In the first instance, it must be recognized that certain events in the history of an individual dialect, language, or language family can indeed be unique, thus producing unique effects. Labov refers to this as 'catastrophism' (ibid.,23-24.), opposed to 'gradualism'.²³

It is well known that catastrophic events have played a major role in the history of all languages, primarily in the form of population dislocations: political changes have led to alterations in the normative structure of the speech community, with radical substitutions of one prestige norm for another, and consequent long-term effects on the language...It will appear

²² See below, §3.13.

²³ Note that catastrophism can, on a higher level, also be opposed to uniformitarianism. Such a view of catastrophism was dominant in both philology and geology prior to the twentieth century. The general idea was that the origins of an entity were to be found in sudden and unique events in the past and that the entity was thereafter fixed in its characteristics. (Labov, Linguistic Change I, 21.)

that such catastrophic changes are more common than previously believed[...] (Labov *ibid.*, 24.)

This is also the core tenet of the Punctuated Equilibrium Model, applied by Dixon to historical and areal linguistics, which will be fully discussed below.

Thus, one cannot minimize or discount the vital differences produced by the myriad of historical, linguistic and cultural traits of any given group; indeed the combination of the principles extracted from modern research and a cataloguing of the above-mentioned idiosyncratic factors will, we hope, produce a clearer understanding of the 'invisible' dynamics of language than an inflexible, formalistic, and highly abstract set of unproven and unverifiable 'laws' and 'universals' ever could. Therefore, in the purest sense of the word, this work could never claim to be 'sociolinguistic'. We do, nevertheless, make frequent recourse to the work of sociolinguists, and just as we do not claim this to be a 'historical' work, we make frequent use of the work of historians. Doubtless some critics may find such a method overly-generalized and unfocussed. In our defence, we cite Labov (*ibid.*), who stated that

Solutions to the Historical Paradox must be analogous to solutions to the Observer's Paradox [in synchronic investigations]. Particular problems must be approached from several different directions, by different methods with complementary sources of error. The solution to the problem can then be located somewhere between the answers given by the different methods (25).

Anecdotes of travellers (the author included) who have attempted to learn the languages of the places they were visiting from a book, with no recourse to conversation with native speakers, or at least access to current audio-visual media, provide the case-in-point. 'Language' as a human behaviour, and individual languages as 'spatiotemporally bounded' entities (Croft pg.1), include structures and systems, i.e. *form*. It also requires a common agreement regarding rules of how and when these forms are to be employed to encode and transmit meaning, i.e. *function*. One more element is required to make the equation complete: *context*. The role of context in the observable and/or reconstructed evolution of languages will be discussed more fully below under its own heading (§2.21), but it is necessary to stress one point at this time. In both the interactions between speech communities, as well as the interaction between individuals, the importance of the role that context plays in the equation described above cannot be understated. In extreme cases, if the speaker and hearer do not agree on the context, the utterance is a linguistic failure to one degree or another. If the purpose of language is to encode and transmit information, and if it is impossible for the recipient to apprehend the meaning (or enough of it to 'get the gist'), then the information contained in the transmission (speech act or written word) did not reach the recipient. Even if this is not the case, different perceptions of the context in which the utterance takes place can produce profoundly different results (ibid. 104-105).

Therefore, to comprehend language as a whole, or any particular language (at any point in history), or the idiosyncrasies of any particular speaker, one must have as complete as possible an understanding of the form, function, and context. Cf. Robert Auty's view, repeated here from Chapter 1:

'Such an approach [i.e. analysing a language taking into account only system-internal factors] yields valuable and satisfying results when we are dealing with languages of distant periods, with the language of non-literate or semi-literate communities, or with the reconstruction of languages spoken in periods for which we have no written records.' (1)

If one cannot understand the workings of a language from a synchronic perspective with incomplete information, then how is it possible for one to understand either an earlier stage in the development of a language, or the workings of a language over time? Again, we emphasize that historical linguistics is an imprecise science due to paucity of directly-verifiable empirical evidence. As V. N. Toporov lamented in 1961, 'единственная возможность -- строить гипотезы.' (qtd. Miller, 30.) However, the work of linguists has provided us with the forms and functions (or near approximations), while the reconstruction of context is due to the work not only of linguists, but also anthropologists, archaeologists, and historians. Application of a catastrophist interpretation of the Uniformitarian Principle allows us to proceed with a high degree of certainty regarding the context in which a language evolved. It is only when one adopts a more holistic view of language history that one can begin to understand not just how some linguistic event occurred, but also why, and perhaps even when and where.

2.7 Interdisciplinary Approaches to Language Change

At this point it is appropriate to make another borrowing from the natural sciences; in this case, it comes from biology/zoology. As a definitive model of inquiry for this exercise, we found that it was most successful, both in presentation and in addressing the pertinent issues, when framed in terms of 'Tinbergen's Four Whys'. This framework, drawn from Dunbar ('Theory of Mind and the Evolution of Language'), is basically a set of criteria that must be addressed if a question is to be fully understood and/or answered. The Four Whys are 1) function, 2) mechanisms, 3) ontogeny, and 4) phylogeny. In our view, an answer to 1 requires examination of the role(s) that a given process or set of processes play in relation to the issue at hand. 2) seeks to deal with the actual manner in which 1) is carried out. 3) deals with the origin and development, not only of the specific functions and mechanisms, but of the entity as a whole and any unique factors influencing their workings. Finally, an examination of 4) entails analysis of the evolution of the entity under question. To reiterate, this method was developed for the examination of animal behaviour and evolution. Nevertheless, as Christie, Croft and Koerner among others demonstrated, models and theories from the sciences can be utilized with great success by linguists and other social scientists. We would add that interdisciplinary perspectives and the testing of paradigms from other areas of academic inquiry are a necessary part of the process of addressing any problem that one happens to be engaged with.

Regarding PIE and Slavonic, much of this material has been catalogued, analyzed, and presented for us. Arguably, 1), 2), and 4) have been treated most successfully over the last two hundred years or so. Where the continuing difficulty lies is in the question of ontogeny, or the origin and development of these languages. If one examines the body of Slavonic historical linguistic work from this standpoint, it rapidly becomes apparent that questions of function, mechanisms, and phylogeny have received the most attention (whether intentional or not), whereas the ontogeny of language change in general, and specific individual changes have not. Chapter 4 of this work deals with these issues in depth; we mention them here for the sake of general desiderata of a theory of change.

Croft drew attention to the often difficult task of ontogenetic classification of individual languages :

[O]ne must clearly distinguish historical entities from the types they represent. A historical entity is a spatiotemporally bounded individual, that is, it is a specific entity that exists in a specific place for a specific period of time[...]But this historical view is often set aside for a different characterization of a language. In this characterization, a language such as German is a system of rules and forms[...]This system is treated as an idealized entity, abstracted away from any particular speaker's mental knowledge or its uses in particular discourse contexts. Is this entity a token or type? It is neither. The German language system is not a token because it has been removed from its historical context: one is not analyzing the mental knowledge of actual speakers, or actual occurrences

of use. The German language system is not a type because it is still a specific entity: German is still a specific language; its rules do not apply to language in general but to the particular language of German. To the extent that its rules apply at all, it is only to an abstract yet particular entity that has only an ideal existence (1-2.).

In effect, the above quotation is a restatement of the Historical Paradox (see above, §2.6). Historical linguists, more often than not, lack empirical evidence for their investigations. We have precious few instances of 'actual occurrences of speech' (ibid.); a few passages of reported speech, which have often been collected, edited, and written down decades or centuries after they may or may not have been uttered at all. And even these come from slightly more modern Slavonic languages; Common Slavonic remains tantalizingly just out of reach. A handful of onomastic evidence reported by Greek chroniclers, e.g. Procopius of Caesarea in De Bellis, Constantine Porphyrogenitus in De Administrando Imperio, and Maurice in Strategikon, or Persian, Arab and Jewish travellers, e.g. Ibrāhīm Ja'qūb, Ibn Rustah, and Ibn Fadlān, are all that we really have to go on. Therefore, any proposed ontogeny of a specific language or of language change in general (or any other aspect of languages of the distant past) will be incomplete. That being said, data and techniques from complementary fields can and should be invoked to maximize our understanding of a given linguistic phenomenon or entity. This must perforce periodically require circumstantial evidence and *argumenta ex silentio*, of which linguists have so often been (justifiably) suspicious (e.g. Schenker, Dawn of Slavic 1). If due caution is employed, this is not as fallacious as it has often been made out to be; to paraphrase Sir Arthur Conan Doyle, when attempting to solve a mystery, one

must first eliminate the impossible. Whatever remains, however improbable, is the truth. Regarding the mysteries of the origin and spread of the Indo-European languages, two specific issues spring immediately to the fore: first, the impossibility that a population large enough to effect the near-total replacement of the indigenous European, Near Eastern, and Western Eurasian languages emerged from the steppes of Central Asia during the fifth millennium BCE, and second, the impossibility that a similar situation occurred 4500 years later as the Slav tribes allegedly carried out a similar replacement of indigenous speech communities in Eastern Europe. In both cases, even if the natural environments had been able to sustain the relatively large populations necessary for such a phenomenon to occur (and in the case of the Central Asian steppes, they definitely weren't; see §3.4), it would have been biologically impossible for the population to increase at the rate necessary to maintain the demographic momentum necessary to maintain the replacement.(§3.11).

2.8 Language Change

As noted in the previous section, linguists, traditionally, are fond of borrowing models of change from the natural sciences, specifically from those disciplines that make use of evolutionary paradigms, as noted above under the discussions of the Neogrammarians and Structuralists. We thus often discuss the 'evolution' of languages from an initial stage of common ancestry to a later stage of multiple linguistic 'progeny' as if it were a smooth and regular continuum. We would argue that in this sense, the evolutionary paradigm is only partially appropriate. When viewing the matter diachronically, i.e. attempting to process centuries or millennia of

evolution, smoothing things out and presenting diagrams with straight lines has thus far been forgivable.

Much of this section deals with the relationships between languages, but first, in what sense do we mean 'language', and in what sense do we mean 'change'? There are almost as many definitions of 'language' as there are those who have studied it. Here we work with the most minimalist definition possible, and one that eschews questions of a philosophical or psychological nature; at this stage we prefer a purely linguistic definition of the nature and function of language. Here we adopt Labov's definition, as it suits our goals of simplicity and functionality.

Language [...] is the instrument of communication used by a speech community, a commonly accepted system of associations between arbitrary forms and their meanings (Linguistic Change I, 9).

Building partly on the foundation provided by the Structuralist model, we suggest that language is a system composed of smaller subsystems, arranged in vertical order. We represent these levels within set brackets; therefore, {p}=the phonetic system, which in any language consists of a finite number of speech sounds. {P}=the phonological level, which is comprised of a finite number of phonemes and a finite number of operations applicable to the interaction of phonemes. Hence, the units contained in {p} are the speech sounds of the language in question. The units in {P} are {p}, and the operations are the phonological rules that dictate how sounds may combine in that language. {M}=the purely morphological level, whose values and operations are again finite in number. {M} is everything contained in {P}, plus

the morphological rules of the language, which govern how morphemes (roots, affixes, etc.) may form and combine. {s/f} represents the semantic and pragmatic ('f' for 'functional') systems, which for the sake of expediency we represent as one system. The constituents of this set are finite as well. Above this level is the lexicon, {L}; naturally, there are a finite number of lexical items in any given language²⁴. Next comes {S}, the syntactic level, also comprised of a limited number of patterns, rules, permissible combinations, etc. The ultimate level of any linguistic system is {U}, the set of possible utterances that any given language will permit. This set is effectively infinite in number.

With the exception of the first set, {p}, each of the sets consists of a) a number of values and b) a number of operations (both quantities will vary according to the language in question).²⁵ The units are the entities (sounds, morphemes, words, etc.), which are acted upon by the conditions also contained in the set. Thus, $\{P\} = \{p\} + \{\text{operations}_P\}$, and $\{M\} = \{ \{ \{p\} + \{\text{operations}_P\} \} + \{\text{operations}_M\} \}$, i.e. $\{P\} + \{\text{operations}_M\}$. The first bracketed set is equivalent to {P}, which is modified by $\{\text{operations}_M\}$ to produce the morphological system.

In other words, each set must be able to refer to all of the information beneath it; the phonological rules must have phonemes to operate on, syntactic rules must have words to operate on, etc. Of course, not every quantity contained in every set is used

²⁴ Practically speaking, there are a finite number of lexemes in a language. Theoretically, however, there is no limit to the amount of lexical items any given speech community can possess.

²⁵ We consider the phonetic set to consist solely of values, and lacking any operative information, which is contained at the next level up, {P}. {p} merely represents the phonetic (as opposed to the phonemic) inventory of the language: all the available speech sounds, which are then subjected to the functions contained in {P}.

for each utterance; some are but rarely used. That is to say, not every value or every operation is referred to for every linguistic act. Also, the operations contained in each set are naturally not always applicable in every environment. Some are mutually exclusive. However, the values to which the operations apply must be present. Or, if a new value is added to the system, then it must be slotted into the system on at least one level. Note that if there is an addition, it has *one* point of entry. It may be accessed by different levels, either at different times or simultaneously, but a new value or operation can only be admitted to the system once. This is often at {L}.²⁶

The nature of the values, which comprise the first component of each set, varies according to the set itself, and the operations are the language-specific rules, constraints, etc., which operate on the values. In addition, the operations within a set are arranged hierarchically, or to use a contemporary term, in *networks*. This fact is amply illustrated by numerous synchronic analyses, most notably in Generative Grammar. The rules of word-formation, syntactic transformations, etc., are well documented elsewhere for a variety of languages, and by and large remain outside the scope of a diachronic work such as this.

Two issues require some clarification: the semantic/pragmatic set, and the intermediate levels. In the first instance, as this work places primary emphasis on historical and social issues in language, it would be quite difficult to include any but the barest discussion of either the semantics or the pragmatics of past language states. Perhaps no element of language is as subject to idiosyncratic usage as the meanings

²⁶ Lexemes can change their referents, both upon entry into the recipient system, and over time (Lehmann, 'Linguistic Structure'). One notable instance of this is in the history of ethnonyms (§3.13, 3.14).

attached to words and phrases, and it is simply impossible to infer anything but the simplest conclusions regarding meaning and usage from the scant information we have available. Also, the semantic and pragmatic sets may include elements which are not purely linguistic in nature, and while these are certainly important, they too lie mostly beyond the scope of this work.

Secondly, we are acutely aware of the fact that the organisational notation we suggested above does not reflect the reality that each level of the grammatical hierarchy was penetrable; we opt for a discrete classification instead, stressing that the classification of the components of grammar into sets is not meant to imply that each set was impermeable. The phonology and morphology of a language often interact, as do the morphology and syntax, especially in inflecting languages such as Slavonic. Or, values may be contained within, and subject to the operations of more than one set simultaneously. Rather than posit separate morphonemic or morphosyntactic sets, we prefer to encapsulate such instances within one set, e.g. {M,S}. Such a notation indicates that a given value or function operates simultaneously on the morphological and syntactic level. These secondary sets, in addition to the values and rules applicable from the two constituent sets, may contain rules of their own (but *not* quantities otherwise not represented elsewhere in the system, as each set contains a finite number of units at any given time). For example, while the set {P,M} contains certain values which are affected at both the phonological and morphological levels, the simultaneous interaction of these operations is neither on the phoneme nor the morpheme, but on the *morphoneme* (or morphophoneme, as some scholars prefer). The morphoneme may in some cases be

superficially identical to either the phoneme or the morpheme²⁷, but is less predictable in its distribution than the phoneme (Townsend 3).

Thus, we suggest that 'language change' is the set of processes—internal and external—that cause the language of a given community to decreasingly resemble that of its forebears, in relation to the amount of time that passes (but not dependent on the passage of time as a factor), all else being equal. It is the addition, subtraction, or modification of some element(s) or operation(s), such that the previously conventional arbitrary association between meaning and form is altered.

Croft labels these processes hyperanalysis, hypoanalysis, metanalysis, and cryptanalysis (117-140). Also, and equally important, an individual language change is a two-step process: innovation and propagation (ibid. 22.) Or, as Campbell and Harris described it (in specific reference to diachronic syntax), 'It is only when the exploratory expression has been reanalyzed as an obligatory part of the grammar that we may speak of a grammatical change having occurred.' (73) That is to say, the 'exploratory expression' is generated, i.e. uttered, and subsequently parsed as either acceptable, and thus integrated into the grammar, or unacceptable, and thus rejected: altogether, a two-step process.

The first part of this formula is self-explanatory, while the second is the locus of much of the discussion revolving around this topic in the literature. Innovations that are not propagated, i.e. are not adopted by other speakers for whatever reason, do

²⁷ For example, Slavonic 'i', depending on what level of the grammar is being analysed, is a) the phone [i], b) the phoneme /i/, the suffix -i, or the conjunction 'i' ('and'). Coincidentally, the same value is shared by multiple sets, but functions differently at different levels.

not affect the language as a whole, while it is obvious that it is not possible to propagate something which does not exist.

However, a linguistic change is not synonymous with language change. The former is, like a language itself, a spatiotemporally bounded entity, while the latter is the sum of all the individual events preceding it; a process, spatiotemporally bounded like its smaller components. It is really a relative difference: at what point do enough changes occur, such that the language itself can be said to have changed? The answer, of course, lies in mutual intelligibility between speakers of different areas/groups, i.e. language-in-use.²⁸

2.9 The Ontogeny of Linguistic Change

Now that we have stated what a linguistic change is, our next (and most important) task is to determine the origins of language change, i.e. its *ontogeny*. If a linguistic change is a spatiotemporally-bounded entity, it must have a definite source. However, because we have defined a linguistic change simply as an addition, subtraction, or modification of some element(s) or operation(s) in one of the sets comprising the language system, we must exercise due caution in answering this question. Arguably, any event which sews the seeds of a profound change in a language, i.e. one that has relatively immediate and intense effects on enough of a previously relatively unified speech community, such that mutual intelligibility has been compromised, then this corresponds to our working definition of a catastrophic

²⁸ 'Although, a language can change and still retain mutual intelligibility with surrounding languages. It depends on the depth and breadth of the change.' (Pugh, written communication, 2002.)

event. By their definition, such events are unique. Although similar events can potentially occur time and time again, the exact circumstances under which they transpired, combined with the unforeseeable results, conspire to make such an event effectively inimitable. To quote the physicist Stephen Hawking's version of the Uncertainty Principle, 'One certainly cannot predict future events exactly if one cannot even measure the present state of the universe exactly!'

Much as a physicist can never hope to account for every single molecule in the universe, so a linguist cannot account for every single speaker, utterance, or systemic idiosyncrasy. Thus, not only are we unable to predict the future of a language with any degree of accuracy, but we are also unable to definitively reconstruct the past of a language. Again we stress that the search for an ever-increasing degree of precision in reconstructing the past is never a wasted effort; if we cannot predict the future, then a clearer understanding of the present is not a bad compromise.

Returning to our main point, while we must avoid being overly specific in defining the point of actuation of linguistic change in general, we can certainly build an inductive hypothesis from evidence gathered. This evidence (presented in Chapter 4) has led us to the conclusion that the origin and cause of language change as a phenomenon lie firmly in the social interactions between speakers, i.e. they are external. The point of origin of *any* modification to a linguistic system lies ultimately in an individual speaker. We may never know the identity of this individual, and certain specific changes very probably resulted from individuals altering their speech habits in similar, but not precisely identical, ways. Thus, it is not an inaccurate claim that the individual is the point of origin for linguistic change within a speech

community. As far as the individual goes, change can potentially occur in any of the subsets of the grammar: the phonology, morphology, syntax or lexicon. Quite often, the origin of a specific change can either be found in the {L} or {P}.

The nature of the change itself may be dictated by the structure of the language, but the structure in and of itself, regardless of 'leaks' in the grammar (Sapir 38.), cannot actuate change. Change does not precede use. In addition, we posit that the point of entry for the vast majority of individual linguistic changes is {L}—the lexicon (cf. Croft 28, where he takes the idea further and proposes the idea of the 'lingueme' as the replicator in language). Certainly changes in word order, for example, are actuated initially in {S} or {M, S} (syntax or morphosyntax), but the vast majority of posited changes seem to relate to lexical items or their morphological, phonological (or even phonetic) or semantic sublevels. The unit changed in any given circumstance may indeed be the phoneme or the morpheme, but in general utterances and words are the first instance of 'linguistic mutation' and the vehicles of the transmission ('reproduction' even?) of a change or series of changes (ibid.). Cf. Meillet:

[...The] only variable to which we can turn to account for linguistic change is social change, of which linguistic variations are only consequences. We must determine which social structure corresponds to a given linguistic structure, and how, in a general manner, changes in social structure are translated into changes in linguistic structure (1921, 16-17, qtd. Labov, Linguistic Change I, 24).

2.10 The Function of Linguistic Change

The functions of language change and linguistic changes are at once much less contentious and much more abstract. While we firmly reject any implications of teleology in the development or behaviour of languages, in some senses, changes can be seen to fulfil certain functions. Perhaps the most important function of actuating and transmitting a language change is the establishment and cultivation of a group identity.

2.11 The Mechanisms and Phylogeny of Linguistic Change

Having considered what a linguistic change and language change as a whole are, the question remains 'How do they work?'. This was the central question, whether the authors were conscious of the fact or not, of the vast majority of scholarship dealing with language change. Essentially, it has been a matter of confusion of the function of linguistic changes and the mechanisms. Below, we summarize the main mechanisms by which linguistic changes occur. The majority of introductory historical linguistics textbooks treat this subject in one form or another, and the list is not long. It includes sound changes, (regular and sporadic, phonemic and non-phonemic, conditioned and unconditioned, mergers, splits, etc.), changes in the morphological structure of a language (analogy, etc.), syntactic change (grammaticalization), and semantic and lexical change (borrowing, etc.) (see Campbell, Historical Linguistics 16-49, 89-105, 226-251, and 254-279; Anttila, Introduction 57-178; Joseph and Janda 311-422, 423-492, 573-666). We describe

each kind of change briefly, followed by relevant illustrations from the Slavonic languages.

2.12 Phonological Mechanisms

Sound change, in all its manifestations listed above, refers generally to 'laws' whose effects, as implied above, can be isolated, generalized, have no effect on the phonemic inventory of the dialect/language, but were assumed by many scholars (especially the Neogrammarians, who claimed that 'sound laws suffer no exceptions' [Osthoff and Brugmann, 1878, qtd. Campbell, Historical Linguistics 18]; Antilla, Introduction 57-87; Hale) to be, within the language under question, without exception in their application. Thus, one could postulate a rule where $x > y / _$, and this would occur in every instance that did not violate the contextual parameters. As with many rules, these 'laws' often do have exceptions. In Slavonic, two well-known examples are the words in West Slavonic 'flower' and 'star', which 'should' exhibit the reflexes of the Second Velar Palatalization²⁹, and be realized as **cwět* and **zwězda*. However, in West Slavonic, this did not occur, eg. Mod. Pol. *kwiat* and *gwiazda*, Mod. Cz. *květ* and *hvězda*, Mod. Sk. *kvet* and *hviezda*, Mod. L./U. Sorb. *kwět* and *gwězda/hwězda* (Press 11). The words for 'star' and 'flower' display the results of this sound change in the other branches of Slavonic, eg. (cf., though, Mod.

²⁹ The Second Velar Palatalization refers to a sound change, common to all of Slavonic (except the instances discussed above), where the velar consonants /k/, /g/, and /x/ > /c/, /z'/ (via /ʒ'/, and /s'/ (S. and ESl) or /š/ (WSl) when a mid or high front vowel, i.e. /i/ or /ē/ followed them (Schenker, Dawn of Slavic 89; Schmalstieg, Old Church Slavic 40-41).

Uk *kvit*, and dial. Rus. *kvit*[*ka*] [ibid.]³⁰ The sound changes specifically relevant to Common Slavonic and the emergent South, East and West Slavonic languages will be discussed in more detail in Chapter 4.

Broadly, sound changes fall under one of three descriptive headings: augmentative, reductive, or transformational (which mirror our more general typology of linguistic changes). Further refinement is possible depending on other factors, such as the effect that a given change has on the word as a whole. Augmentative sound changes, as the term suggests, add a phoneme or phonemes to the word in question. This can occur for a variety of reasons, for example, if speakers find a particular cluster of consonants difficult to pronounce without inserting a vowel to 'break up' the cluster, or perhaps by analogy to other lexical items which resemble the one in question to a high enough degree that one would predict the phoneme to occur in that environment, when in fact it did not originally. A classic example of an augmentative sound change is the development of pleophony in East Slavonic. Basically, the Late Common Slavonic sequences consisting of some combination of a stop+vowel+liquid+stop (often referred to in the literature as TORT sequences) resulted in the addition of another vowel to break up these sequences. Other Slavonic languages did not develop in this way.

Reductive sound changes are the opposite of the above; a phoneme is simply deleted. A definitive example of this kind of sound change can be drawn from the

³⁰ It is generally thought that the failure of SVP to affect these words has to do with the 'opacity' of the /v/, i.e. that in other branches of Slavonic, this phoneme was 'transparent' enough to allow the sound change to occur, but in WSl, /v/ was strong enough to block the effects.

history of the *jers* (ъ and ѣ, transcribed ŭ and ĭ). These phonemes, once common to all of Slavonic, have undergone either transformation or deletion during the fragmentation of Late Common Slavonic; only in Slovenian and Bulgarian were ultra-short vocalic phonemes retained (Sl. e, Bg. ѣ) (Shevelov 433). When these phonemes occurred in certain positions, they were elided (and were labelled 'weak' by modern investigators). Often considered to mark the end of the Proto-Slavonic period (Schenker, Dawn of Slavic 97; Shevelov 462-464), this event had a profound impact on the subsequent history of Slavonic, and will be discussed fully below, under its own heading in §4.21)

2.13 Morphological Mechanisms

Changes which centre on the morphological systems of the language (although they can and often do have profound effects on other aspects of the grammar) include analogy, grammaticalization, and borrowing. Generally, morphological changes are paradigmatic (as opposed to syntagmatic), meaning that they affect only single units, or classes (as opposed to an entire construction).

By analogy we mean a '[p]rocess by which form *a* is either changed or created in such a way that its relation to another form *b* is like that of other pairs of forms whose relationship is similar in meaning.' (Matthews 17) Slavonic is rife with examples of analogy. '[...A]nalogy helps to regularize all that is atypical, irregular, and unexpected in the development of language.' (Schenker, Dawn of Slavic 161) Schenker cited several examples of early Germanic loans into Slavonic, which were

affected by analogy. The list included *stoklo* ('glass') < Gothic *stikls* ('goblet'), where this noun was assigned the neuter gender on the basis of the tendency for a word representing an object to come to denote a substance. Native examples included the words for 'fat', 'food', and 'weft' (*sadlo*, *jadlo*, and *predlo*, respectively) (ibid.). Another case is the Germanic word *kar(a)l* ('king', < Karl der Grosse), realized in Slavonic as *korl'ь*. Analogy to Slavonic substantives with the *-tel-ĭ-* suffix, e.g. *učitel'ь*, *česar'ь*, *knędz'ь* ('teacher', 'tsar', 'prince') resulted in the assignment to the *-ĭ-ŏ* stem class (ibid.).

Grammaticalization refers to '[t]he process by which, in the history of a language, a unit with lexical meaning changes into one with grammatical meaning.' (ibid. 151; Joseph and Janda 575-601) This process played an important role in the histories of PIE and later Slavonic. Shields ('On the Origin of the Baltic and Slavic *o*-stem Genitive Singular Suffix **-ād.*') argued that grammaticalization of deictic particles was responsible for the formation of PIE genitive case markers (167). An example of this process in Slavonic is the formation of the Old Church Slavonic definite (long) adjectives. These forms are composed of the indefinite (short) form with the addition of the third person personal pronoun, e.g. *slěpajego*, 'blind (genitive masculine singular)', or *ništajego*, 'poor (genitive masculine singular)', where the second element, i.e. *-jego*, is the genitive masculine singular personal pronoun (Schmalstieg, Old Church Slavic 57-58). In this instance, the personal pronouns were grammaticalized as indefinite adjectival inflections. (Note that they were not completely bound in this way, as they simultaneously retained their pronominal functions outside the nominative case.)

Borrowing is simply the adoption of a novel lexical item from another language or dialect. There are thousands of examples of non-native lexemes borrowed into Slavonic, at various stages of its evolution. As a preliminary hypothesis, we suggest that lexical items are borrowed for two reasons: deficiency or prestige.

Deficiency can take one of two forms: linguistic or social. In the first instance, if a given speech community comes into possession of some item, technique, or concept (in the broadest sense of the term), from a source external to the community, which it had not previously been in possession of, it would seem valid to suggest that the accompanying terminology would be borrowed as well. This is not to argue that the language in question would not be able to create a term from pre-existing resources, whether *ex nihilo* or in the form of a calque. Modern examples of this abound (though frequently such modern terms are coined for political reasons, e.g. purism.)

Social deficiency, on the other hand, is much more difficult to quantify or qualify during the remote period of history with which this work deals. Perhaps the most concrete assertion we can make at this point is simply that it would have occurred. Since we do not know precisely when or how, its relevance for this work as a whole is not as great as that of linguistic deficiency. Nevertheless, it fits in with our overall schema, and deserves brief mention. Basically, this phenomenon occurs when there is a significant difference in population and/or prestige. The sheer social

pressure can cause words and constructions to be borrowed into the recipient language, even though it may already possess the requisite terminology.

Lack of terminology to denote a specific object, substance, action, or concept is naturally not the only motivation for the adoption of non-native lexical items. Prestige is the other main cause. In a period and region characterized by relatively basic social structures and institutions, settlements of limited size, and a relatively low (but seemingly steadily increasing) population density, and yet on, or adjacent to, several major Eurasian trade arteries (see Chapter 3 for fuller discussion), we can most likely assume that prestige played a major role in both the interaction of different communities, as well as within each community. The success of all manner of endeavours depended on systems of obligation and alliance, where prestige and respect ensured the accomplishment of various endeavours, or the lack thereof caused them to fail. Language was a crucial ingredient in this complex equation. Depending on the context, either linguistic innovation or conservatism could contribute to the maintenance or establishment of one's standing within their community. '[...T]he principal function of language was (and still is!) [sic] to enable the exchange of social information ('gossip') to facilitate bonding in larger, more dispersed social groups.' (Dunbar 98)

Therefore, if a particular group, or member(s) of a group have access to a particular item, or have been exposed to an idea or method, which imparts some sort of advantage, it seems arguable that their prestige will increase, perhaps at the expense of the others'. Furthermore, when the term for such an advantageous

innovation is borrowed, the (implicit or explicit) connection between the two would serve to cement the prestige inherent to the advantageous development. Ergo, using a borrowed lexical item with a high prestige value in the community (new tool, technology, etc.) would thereby identify the speaker in some capacity with the prestigious innovation. Thus, prestige facilitates the propagation of a non-native lexical item, under certain circumstances.

2.14 Syntactic Mechanisms

This section relies heavily on Campbell and Harris (Historical Syntax in Cross-Linguistic Perspective). While making use of Generative and Neogrammarian methods and terminology, the approach is balanced, and our views have much in common. They isolate three mechanisms only that operate on the syntactic level of a language.

In this particular arena of language change, certain aspects of Generative Grammar come into their own. As previously stated, the overt abstraction and formalism of these models is inappropriate for certain kinds of linguistic inquiry. That being said, on the level of syntax (at least in regard to Slavonic), the concept of rule-based mechanisms and hierarchical relationships between constituents of a given syntactic unit allow for both precise and concise examination of the mechanics of change on this level. To reiterate, we do not find fault with ideas such as D-structure, underlying forms, transformations, etc. We merely assert that these are of secondary

importance in an examination of language change, relevant primarily to synchronic examinations.

Campbell and Harris claim that there are only three processes at work in any instance of syntactic change: reanalysis, extension, and borrowing (see §2.13 Morphological Mechanisms above). Cf. Croft, who claims, in line with his theory of form-function remapping, that reanalysis is the only process (in various guises) at work (117-140). Regardless, syntactic mechanisms certainly must be taken into account in any general theory of linguistic change, however, they are not as pertinent to the history of Slavonic. This is partly due to the fact that, at least in regards to the declension of the nouns, these languages (with the exception of modern Bulgarian) continue to be heavily inflecting. Gołab noted that both modern Bulgarian and Macedonian are only 'moderately innovative' phonemically, but 'extremely innovative' grammatically ('Conservatism and Innovation in the Development of the Slavic Languages' 371).

2.15 Towards A Phylogeny of Change

Now that we have addressed the areas of ontogeny, function, and mechanisms of linguistic change in general, we are confronted with the final of the 'Four Whys': phylogeny. The vast majority of early philological scholarship attempted to address the phylogeny of languages, most often the Indo-European languages. On the whole, it was a successful effort. The *Stammbaum* model is the definitive illustration of the phylogenetic relationships between each of the Indo-European tongues. The

Stammbaum is also appropriate to the illustration of several other language families, e.g. perhaps Finno-Ugric and Polynesian.³¹

What has not thus far been attempted is a phylogeny of change. If comprehensive enough, such a model would satisfy our desire for a diagram which details not only the descent of related languages, but which also captures the relationships between adjacent or co-territorial languages which have no genetic connection to each other, e.g. Slavonic and Finnic. It would have one further benefit as well—if individual changes were similar or identical on some level (mechanism, function) and occurred within relatively the same time-frame, it would vindicate our assertion that linguistic contact is the ultimate motivation for language change. If we accept Shevelov's view, that the birth of one language is the point in time at which it changes in a way or ways which other related languages do not (21, 32)³², then it seems not only reasonable, but also necessary to a more complete understanding of the history of a language or language family to catalogue and arrange chronologically the individual changes, which occurred in adjacent and co-territorial languages.

³¹ See Dixon for instances of the inappropriateness of the *Stammbaum* model to other language families, most notably, the Australian languages (28-30), as well as Napol'skikh for criticism of the use of the *Stammbaum* for Finno-Ugric.

³² 'The history of CS [Common Slavonic] begins with the first development not shared with all the other IE dialects. Accumulation of such developments, perhaps triggered by the first one, gradually made CS a separate language.'

2.16 Macromechanical and Micromechanical Linguistic Change

Broadly, we can divide language change into two types: profound and superficial, or, as we shall use from here on 'macro-' and 'micromechanical'.³³ Essentially, micromechanical change represents the short-term, inherent and mundane flexibility of usage that every language possesses. Over time, it can, in combination with other factors, result in a language undergoing relatively insignificant changes rendering it superficially dissimilar to the prior system, as novel constructions are transmitted through the various social networks, which comprise the speech community, but is not in and of itself enough to generate an entirely new system of communication. Macromechanical change, on the other hand, is more comprehensive. As the name implies, it works on both the deeper levels of the language as well as on a larger scale, and produces the shifts in paradigm which wreak the changes which give rise to a new language. It also implies (but does not categorically necessitate) a greater time depth.

Pursuant to the broad outline given above, we group sound change, analogy, grammaticalization, and drift under the heading 'micromechanical'. The impetus for these phenomena can naturally originate within the language community in question, or outside of it. Shift and borrowing we group under the macromechanical designation. Again, this is not in reference to their point of origin, but in the net effect

³³ Cf. Campbell and Harris: '[...A]s the grammar adjusts to the new situation, additional, less far-reaching changes occur. These "actualizations" [sic] may be considered micro-changes, part of a larger macro-change.' (48)

that each process, when examined in isolation, can have. Obviously, the line between micro- and macromechanical is vague at best; for example, lexical borrowing can be so slight at a given time that it neither affects the language as a whole (merely certain registers, dialects, etc.), nor has a profound effect on the dialect in question. It comes down to a question of degree; have the realizations of a given change produced significant (or 'pernicious' to borrow Weinreich's term) homophony within a language, such that so-called 'therapeutic changes' are triggered (Aitchison 168.) which reduce ambiguity or restore lost functionality on some level? Has the shift of a large number of speakers of another dialect or language introduced new elements into the phonemic inventory, such that the meanings of roots and affixes have been redefined, or lost altogether?

2.17 Lack of Concrete Divisions within the Hierarchy and Mechanisms of Change

A concept that has enjoyed some success since the early days of historical linguistics is that of 'drift'. P. H. Matthews defined it as '[A] pattern of change in which the structure of a language changes in a determinate direction.' (Dictionary of Linguistics, 106) Sapir claimed that 'the drift of a language is constituted by the unconscious selection on the part of its speakers of those individual variations that are cumulative in a special direction.' (qtd. Andersen 19) The idea of drift, that certain changes catch on, and then take off throughout the language's systems and structures, is one that is amply demonstrated by the history of any language. Changes occur in the phonology, morphology, and even syntax of any language. Where we take exception to Sapir's (and Andersen's) view is that it is teleological.

Drift may indeed have structure, and following on the principle of a two-step characterization of change, i.e. innovation followed by propagation, it can certainly be seen to 'S-curve'³⁴ itself through the language. However, Andersen stated that

[...]as part of the answer to the question why drift has structure, it has to be noted that such structure may result when speakers of a language impose order where previously there was none. (17)

This implicitly follows the Structuralist view of the typology of languages, where '[the] language type [is...] an optimum, which the given linguistic system, *ceteris paribus*, will tend to approach through its changes.' (ibid. 8) Neither of these statements is precise enough.. It is impossible for macromechanical language change, under normal circumstances, i.e. the absence of language planning, e.g. OCS (see §2.18), to be teleological. The Principle of Catastrophism dictates that the historical events which give rise to macromechanical processes are unique. It can hardly be claimed that such events as the Neolithic Revolution, the Secondary Products Revolution, the Great Migrations, or the Christianization of the Slavs had some sort of grammatical improvement as their goal.³⁵

On the other hand, micromechanical change can often be considered to have teleological aspects, i.e. imposing 'order where previously there was none in some subsystem of the grammar. Even then, though, such instances are primarily speech acts, two main intentions behind them being a) the effective transmission of

³⁴ See Labov (*Linguistic Change I*) and Aitchison.

³⁵ Ironically, one result of the Moravian Mission of 863 was the introduction of literacy to the Slavs of Central Europe. OCS, as the newly-invented literary language, can be viewed thus as the first instance of language planning among the Slavs (see §2.18).

information, and b) the establishment of distance from, or inclusion with a certain group. The smoothing out of irregularities via analogy, for example, may well result in a lower degree of irregularity within a subset of the grammar; but it does not mean that the language as a whole is more 'orderly' or closer to its 'optimum'. Order is increased in one area of the language, often at the expense of another area. Furthermore, it is highly questionable to assert that the farther back in time one goes, the less orderly languages as a whole were. One could certainly not argue that Ancient Greek was less orderly than koiné or modern Greek (indeed, some would argue that it was more so.) It is equally as difficult to maintain that languages are inexorably moving towards the optimum of their type. Any element of a linguistic system can change, it can change in any direction (although certain tendencies do exist, and certain things tend to change before other things), and it can change at any time (see Campbell 'On Proposed Universals of Grammatical'). One change may be the result of another previous change, but it does not have to be; it can occur in isolation or in relation to another. Furthermore, if this assertion were true that languages were behaving teleologically, at least in the extreme sense of moving intentionally toward the optimum of their types, then would not at least one language, somewhere on earth, not have reached its optimum already? Indeed, it is impossible for a language to be a pure 'token of its type'. So, while macromechanical changes may indeed have structure, they are not teleological, and while the system may display certain tendencies, these are not to be characterized as inbuilt drives towards an optimum. If teleology is present at all, it must be within the constraints of micromechanical change.

2.18 The Actuation of Change

Perhaps at first glance it seems strange to discuss the causes of language change after the mechanics of language change. It was intentional, and fits in with our overall scheme for this work. Indeed, as stated earlier (§2.1), we are not so much concerned with how change occurs, as why it does. Much work has gone into the examination of the mechanisms of change, and we have little of relevance to add to that discussion. Where we believe work is still required is in determining the motivation of language change, and, as stated earlier in this section, we have found that many scholars have confused the two, or had little success in determining the cause of these phenomena. The explanations that have been advanced cover a broad range of thinking, but generally centre around psychological causes and the individual speaker. Differences notwithstanding, it is most common to read of some random element, innate in human language, yet rather difficult to describe or quantify in any way. Examples include 'The Invisible Hand Theory', whose originator and main proponent is Rudi Keller, the 'Child Language Acquisition Theory', and the 'Grammaticalization Theory'. Others abound, and have done since the origins of historical linguistics as an academic discipline, some of which cannot be treated with any degree of seriousness (theories citing such supposedly racially-determined factors as skull morphology or environmental factors like the extreme cold and humidity of north-central Europe).

Aitchison suggested a framework for explaining language change in her work Language Change: Progress or Decay? In attempting to answer the basic question 'Why do languages change?', she adheres to the traditional division between external

and internal processes, with a definite bias toward the internal motivations as primary. Citing sociolinguistic factors such as language contact (substrata and borrowing), fashion, functional processes and random fluctuation for the external motivations, and 'natural tendencies', iconicity, therapeutic changes, and chain reactions as internal, she proposed an appealingly simple view of language change. Unfortunately, her arguments fail for several reasons. It is laudable that she did not follow in the footsteps of some of her predecessors in discounting external factors entirely. Appealing to the idea of 'psychological weak points' inherent in the structure of languages the world over, first advanced by Sapir, she stated

[...T]here seem to be hidden and inbuilt constraints concerning which elements can change in a language. There are often identifiable "weak spots" in a language structure where change will be likely to strike, as well as stable elements which are likely to resist change. (136-137)

Regarding the final of her three points in the above quotation, we take no issue whatsoever with the point that there are elements of any linguistic system which *tend* to resist change. Examples abound from every language. Old Church Slavonic instances of forms resistant to change include the vestiges of the old feminine *-ŭ* stem noun declension³⁶, e.g. *bry-brŭve* (brow), *kry-krŭve* (blood), *svekry-svekrŭve* (mother-in-law), and the consonantal stem nouns, e.g. *imę-imene*, *vremja-vremene*, among others (Schenker, Dawn of Slavic 108).

³⁶ The *-ŭ* stem declension was also the receptacle for several borrowings from Germanic, e.g. *bordy* (battle-axe), *buky* (letter), *koty* (anchor), *smoky* (fig tree) (Schenker, Dawn of Slavic 108).

Regarding the second point, that of 'weak spots' in a language, elsewhere in her book Aitchison defined these as elements of the language which are, because of their frequency of usage and the nature of the element itself, e.g. consonant clusters, more susceptible to alteration (84-89). There is no argument that consonant clusters are frequently simplified, cf. the various resolutions of consonant-liquid clusters in Slavonic, the TORT phenomenon, that final consonants are frequently dropped, e.g. the Law of Open Syllables and its repercussions in Slavonic. However, to argue her first point, that there are constraints on what can change, and that those elements on which there are less constraints due to frequency of usage are required to change, is inaccurate.

If one looks at any grammar of any language, it will become immediately apparent both that there are elements of the system which enjoy a high frequency of usage, yet are definitely *not* affected by otherwise prevalent changes, and furthermore that linguistic systems tolerate a high degree of asymmetry, throughout the hierarchy of structures.

Not every consonantal phoneme is paired neatly according to its distinctive features, nor is every vowel. In the lexicon, relic forms survive, collective nouns are common, e.g. Russian *ljudi* 'people' (sg. *čelovek*), which have no singular counterparts. As mentioned above, words which presumably enjoy wide currency, while they have certainly undergone sound changes, have resisted analogy, to a greater or lesser extent. Another example of words which enjoy frequent usage, and were not originally phonologically or morphologically 'irregular' (and not perceived

as such today), i.e. there was no obvious phonetic or phonological reason for them to have resisted sound change, are 'flower' and 'star' in Polish. Yet both of these resisted an otherwise universal palatalization of velar consonants occurring after front vowels. From the standpoint of Neogrammarian linguistics, which asserted that 'sound laws suffer no exceptions', here we have an exception to a sound law. Andersen (Reconstructing Prehistorical Dialects) and Press both provided numerous examples of phonemic inventories where things are hardly symmetrical, yet the systems have displayed remarkable stability. To be sure, ease of articulation is a definite cause of micromechanical change, however, to assert that an asymmetry is a structural weak point is, we believe, erroneous.

Regarding supposed constraints on what can change, we find this idea equally misguided. Campbell ('On Proposed Universals') demonstrated that, effectively, there are no constraints (typological or otherwise) on what can be borrowed into or out of any given language. Noting that some features are more easily borrowed *vis-à-vis* the precise circumstances at play within a given linguistic area, Dixon noted that '[...] any aspect of human culture can be borrowed from one community to another.'

(19) Phonetics and phonology, lexemes, grammatical categories, constructions, techniques, and forms can all be diffused over a linguistic area (*ibid.* 19-22). If there are no constraints on one type of change, i.e. borrowing, but only tendencies, are there constraints on others? Or is it again a matter of certain changes, e.g. analogy, being more likely to occur at certain points in the system, than at others, and not a blanket universal, inbuilt constraint?

Several universals and general principles of grammatical borrowing have been proposed, but not surprising, virtually none of them holds true in any

absolute sense. The moral for would-be constrictors of grammatical borrowing, then, is that given enough time and intensive contact, virtually anything can (ultimately) be borrowed. (Campbell, 'On Proposed Universals 103-4)

We are not arguing that it must, nor that certain areas of a language are not more likely to change first than others, merely that frequency of usage is not a reliable index of the likelihood of a given element to change. Nor is it productive to claim that certain parts of a language cannot change. There are too many variables at work when languages undergo profound, widespread changes, to list frequency of usage as a primary determinant of susceptibility to change. Pugh substantiated our caveat by providing numerous instances where the Baltic Finnic languages of northern Russia have undergone massive changes due to intense and enduring contact with Russian; not just lexical borrowing *per se*, but importing of new phonemes (palatalized consonants), new syntactic processes (involving verbs especially), etc.

All the changes considered in this chapter were superficially caused by sociolinguistic factors -- fashion, foreign influence, or social need. On closer examination, many turned out not to be "real" causes, but simply accelerating agents which utilized and encouraged trends already existing in the language [...]. They exploit a weak point or potential imbalance in the system which might have been left unexploited. This exploitation may create further weak points in the system. (Aitchison 151)

Here Aitchison's thesis is neatly summarized. As we have, it is hoped, demonstrated, this is not entirely correct. Numerous potentials may exist at any given time in a language; speakers could potentially borrow one word in favour of another, thereby introducing all sorts of subsequent dynamics into the system. Speakers could re-analyze a declension on the basis of another, thereby rendering an inflexional paradigm obsolete. If we accept that language changes are unpredictable, then it would be fallacious to then turn around and attempt to predict them anyway. What is important from the social perspective is not what could have happened, but what did. And what did happen to a language was almost certainly dictated by social and historical factors. Therefore, to argue that external causes are simply catalysts, while superficially true, does not do justice to the fact that language changes as a result of use. Language usage is moderated and directed by social factors, whether within a speech community, or between two separate speech communities. Internal mechanics are not the cause of language change, rather, they are the result of language use. Grammars may indeed 'leak' -- this has been demonstrated many times over, but the trickle of internal change is nothing to the torrent of externally motivated change.

Returning to the issue of whether or not language change is teleological, we re-assert our belief that it is not (cf. Croft 66-71). Barring incidences of language planning, where the course of the development of a language is, however successfully, intentionally influenced by an individual or group within the speech community, the vast majority of instances of language change are non-teleological.

A notable instance of teleological language change relevant to the discussion at hand is the creation of Old Church Slavonic. Arguably, the work of Ss. Constantine-Cyril and Methodius was formal language planning. Here, we have decisions of a linguistic nature made which had profound effects on the entire course of the history of at least two branches of Slavonic, to a greater or lesser degree. Not only can we point to the codification of a specific dialect of Slavonic as the literary and liturgical standard with explicit ideological agenda, we also have a massive degree of intentional planning going on with regard to the lexicon; in addition to numerous Slavonic neologisms and calques (from Greek, mostly) there was also wholesale borrowing of Greek ecclesiastical vocabulary.³⁷

Such events aside, language change is, to reiterate, non-teleological. It is difficult to envision the Slavonic speech community of the early first millennium CE, altering the course of the *entire* linguistic system by conscious design. Although language change is not teleological, individual language changes could have been propagated intentionally (but did not have to be). If we accept that language-in-use requires a tacit agreement between speaker and listener, i.e. all parties concerned agree to a greater or lesser extent that each set within each speaker's mental grammar is similar enough to allow for comprehension--that the form-function-context mapping is nearly identical for each conversant, then a modification of any element or any operation of any set, is potentially intentional, but again, not teleological. Rarely does one engage in a speech act for the express purpose of being misunderstood by

³⁷ Samples of borrowing include *aggelъ*, *aminъ* (originally Hebrew), *apostolъ*, (*arx*)*ierei*, *dvjavoľъ*, *evaggelъskъ*, *episkopъ*, *eretičъskъ*, *pasxa*, *poganъstva*, *stadii*, and *filosofъ*. Examples of calqued ecclesiastical vocabulary include *blagovestovati*, *blagosloviti*, *bogorodica*, *vъskręšenie*, and *pavečernica*. (Schmalstieg, *Old Church Slavic* 225-291.).

one's listeners. Furthermore, within a given speech community, the speakers will tend to conform to the pre-existing linguistic norms to the best of their abilities, such that any deviation from these norms will result in modifying the speaker's perceived inclusion in the group. Of course, the speaker may not want to be perceived as part of the group, or may not have a fluent enough knowledge of the linguistic norms of the group to 'fit in'. Note that the above statement applies to members of the same speech community, and not to those who are speakers either of the same language, or of mutually-unintelligible (or intelligible only with some degree of difficulty) dialects/languages.

2.19 'Critical Mass' and the Punctuated Equilibrium Model

By the term 'critical mass', we mean the locus of language change, i.e. the point in time when the language under observation has ceased to be close enough to either its forebears or its neighbouring dialects, so that it is no longer intelligible to speakers of other varieties, due to the effects of enough individual changes (often within a very short space of time).

[...O]nce two dialects reach the stage of being different enough to lose mutual intelligibility and become separate languages, this happens rapidly, within a couple of generations. Each undergoes fairly radical changes in grammar and replaces lexemes at a faster rate than usual[...] (Dixon 62)

To define it in the terms used in the quotation above, critical mass occurs when enough addition, subtraction, or modification of any of the linguistic subsets has

occurred and been propagated throughout the speech community, through a combination of micro- and macromechanical change, that the language spoken is different enough from its predecessor from a systemic perspective that it would not be understood by speakers of the previous variety. This can be represented graphically in two ways.

The first method is by means of the 'S-curve'. If an S-curve represents a change-in-process (innovation followed by increasingly rapid propagation, followed by a levelling-off period), then, examining the entire history of a certain language, we would doubtless find S-curves here and there the entire way through, representing micromechanical changes. The critical mass period is the time when we would expect to find a large number of S-curves occurring simultaneously, or relatively quickly on each other's heels. The S-curve representation is arguably more appropriate for contemporary studies of change, where large amounts of concrete data are available. When engaging in diachronic studies, we can only postulate the relative positions of various S-curves in the absence of any record of the actual changes as they were happening. However, if we adhere to one of Shevelov's principles, i.e. that '[o]ne must not be too sceptical' of historical reconstructions, then even if all we possess is a reconstructed grammar, we at least have an 'algebra' of the language, so long as we remember that it is an algebra only (9).

If, however, we wish to illustrate this principle by means of the *Stammbaum* model (either the traditional version, or our modified phylogeny of change), then critical mass would be located at the splits in the tree. However, it is not appropriate

to view each phenomenon as a single, all-encompassing event, illustrated by a simple bifurcation in the tree diagram. One node bifurcates, trifurcates, etc., and the pre-existing language ceases to exist in the process, *ad infinitum*. Rather, we should take a 'magnifying glass' to the splits. That we know relatively little about the actual manifestations of the languages at the moment of bifurcation is not important at this point. Provided that a genetic relationship between mother language and daughter languages can be demonstrated, the phenomenon is best illustrated by means of layering. If we cannot assume that the mother language was uniform, then we certainly cannot assume that any particular daughter language was either; different segments of the 'daughter speech community' might very possibly have already come under different influences/displaying different tendencies for quite some time.

Another important point is to remember that even well after the emergence of one or more daughter languages, the mother language need not have ceased to exist. It may well have, if we are dealing with one, relatively homogenous community. However, if we are discussing several communities who spoke the same language or highly similar dialects, then it seems reasonable to argue that in one location, the mother language was spoken for longer than in another. Or, to use our own terms, there must certainly have been a significant lag between innovation on the scale of the entire language, and propagation. Critical mass need not have occurred everywhere, in each community, simultaneously. Furthermore, within the larger enclaves, it would also seem rational to posit the existence of social groups, e.g. the elderly, those isolated for cultic/religious reasons, etc. which adopted the newer linguistic norms later than the bulk of the community.

Finally, if we are dealing with a mother language with as large a geographic range as Common Slavonic, then it comes as no surprise that different daughter languages/dialects developed from different geographical regions of the Common Slavonic speech area at different times. While we can never know for certain in which village the 'jers fell first', it does not seem outside the realm of reason to assume that it was earlier in some places than others, and possibly coincidental, i.e. it was not a chain reaction, but occurred independently in different places. The Structuralist implications of the last point are self-evident, i.e. that some sort of 'leaking grammar', 'psychological weak points', or 'lessened functionality' had something to do with this, but, as noted above under the discussion of Aitchison's work, this potential event was almost certainly inextricably bound to the wider and more intensive contacts with other cultures and languages that the Slavs were experiencing at the periphery of their speech area, and perhaps within it as well. (see § 3.9-3.11 below)

This is essentially the 'Punctuated Equilibrium Model', a framework borrowed from the natural sciences and applied to historical and areal linguistics by R. M. W. Dixon. In The Rise and Fall of Languages, he drew attention to the fact that the *Stammbaum* is not an appropriate model for the descent of all languages, or at all periods. Citing several well-known areas where the Family Tree model does not apply, because there are no demonstrable phylogenetic links between the languages in these areas, the term 'family' is a misnomer. His examples included Australia, the Caucasus, Mesoamerica, and the Pacific Northwest of North America. Nevertheless, these languages shared many common features, due to diffusion throughout the

linguistic areas under investigation. He noted many instances of languages which were or are typologically dissimilar adopting features of other languages for which there was no 'structural niche' in the recipient language.

Beyond common tendencies of languages in contact, Dixon proposed that languages go through extensive periods of equilibrium, during which languages and dialects, which are geographically adjacent, come to resemble each other to an increasing degree, as more time passes. Equilibrium periods are characterized by a multiplicity of political groups of roughly equivalent size³⁸ that would remain relatively constant throughout the period. In addition, each group would have similar lifeways and similar levels of technological development. The final hallmark of an equilibrium period is that no single political group, and consequently no single language, would enjoy a prolonged period of prestige leading to socio-political dominance over the others (Dixon 68-69.).

Under such specific circumstances, prestige factors do not tend to affect what is borrowed, or who borrows what in the long-term, in the sense that each group enjoys roughly equal amounts of prestige. It is during these stages in linguistic history that large-scale diffusion tends to occur. These equilibrium periods, he argued, characterize the majority of the history of human language. Furthermore, this scenario cannot be captured by a *Stammbaum*-type depiction. Genetic relationships rapidly erode during equilibrium, as prolonged contact has blurred the lines between languages and dialects to such an extent that it is difficult to determine which

³⁸ '[...O]ne group could be [...] four times as big as another, but not a hundred times as big.' (Dixon 68)

languages were descended from which. Without the Structuralist scale of proximity, there can be no genetic classification.

Where phylogenetic classification of languages becomes appropriate and necessary is during periods of punctuation. This is when language families are born. Dixon cites a number of events as the catalyst for punctuation: natural, i.e. environmental causes, material innovation, the development of aggressive tendencies within a society³⁹, expansion into uninhabited territory, geographically-limited punctuation, and expansion into previously inhabited territory. All of the above have a direct bearing on the Slavonic situation. These events in turn trigger the (relatively) rapid splitting and sub-splitting of languages, which is characterized by a Family Tree model. If the event which initiated the punctuation period is followed by other, equally disruptive events, then the scenario will continue. While Dixon himself did not go into extensive detail on this last point, it would seem valid that if an entire linguistic area can experience punctuation producing one or more language families where the constituent members are genetically related, then certainly a sub-family could as well. Furthermore, a 'localized punctuation', i.e. one which has only regional ramifications is just as important to our study.⁴⁰

The concepts of punctuation and equilibrium are eminently applicable to the history of the Slavonic languages. Building on the idea of viewing certain historical events from the standpoint of 'processual models' (see below, §3.13), under the

³⁹ Dixon cited the development of writing under this heading; the introduction of literacy to the Slav peoples had a profound effect on them and those around them.

⁴⁰ This is not to imply that 'localized punctuation' should be confused with system-internal linguistic changes.

umbrella term 'punctuation event', we would argue that, barring punctuation caused by natural disasters, prolonged periods of inclement weather, etc., one can identify several different types of 'demographic punctuation', relative to the size and number of groups involved. In the first type of scenario, which we label Punctuation₁, one speech community expands into the territory of one or more other speech communities. This could take many forms: one village or city expanding and engulfing those around it, e.g. the growth of Kiev or Novgorod, or the migration of the Germanic-speaking Goths south-eastward through Slavonic-speaking territory

Punctuation₂ is the opposite of the above; it occurs when a smaller speech community is surrounded by one or more larger groups. Relevant examples of this phenomenon include the fate of Greek-speaking communities in Crimea, Moesia, Thrace, and the Peloponnese after the Slav tribes overran the Byzantine frontier, starting ca. 5th century CE, i.e. temporary or permanent cultural and/or linguistic assimilation to the majority group, or the situation of the Slavonic-speaking tribes of the steppes and wooded steppes of Ukraine during the period of the Great Migrations, when numerous Turkic-speaking groups overran the area. (The distinction between Punctuation₁ and Punctuation₂ is entirely one of perspective, i.e. are we discussing a situation from the standpoint of the 'invaders' or the 'invaded'?)

Finally, by the term Punctuation₃ we mean the meeting of two speech communities of relatively equal size, where, in accordance with Dixon's definition of such an event, one group is more aggressive, is more technologically advanced, or carries more prestige than the other. Examples of this sort of event from the history

of Eastern Europe could include the meeting of increasingly large groups of Varangians with local Slav settlements, or the steady influx of small groups of highly mobile, highly aggressive Central Asian nomads into areas where a more sedentary economy was practiced, but population density was relatively low.

The effects and duration of a punctuation event depended entirely on how large the area in which such an event occurred was. Did either the influx of nomadic groups from Mongolia and western China via Central Asia, or the increase in Scandinavian exploration and commerce down the waterways of eastern and central Europe count as a punctuation period in the same sense that the introduction of agriculture into Anatolia, Transcaucasia, and Europe several millennia earlier? We believe that they did. In this instance, the question is not only how widespread were the effects, but also what the nature of the effect actually was. A punctuation period is generally so regarded because of the subsequent effects it had on the languages in a linguistic area, in addition to other, more purely social manifestations. So, the period during which large numbers of Eastern Orthodox clergymen immigrated into Rus', though on a much smaller, yet more rapid scale than the 'Neolithic Revolution', have counted equally well as a punctuation period, noting only that the linguistic area in question was Rus'.

How long Proto-Indo-European enjoyed equilibrium is a matter of much speculation, and depends to a great degree on where one would place the starting point, homeland, etc.⁴¹ When we look at Slavonic, though, it becomes apparent (cf.

⁴¹ Cf. Mallory and Renfrew (1987) for the two main opposing viewpoints.

Lehr-Spławiński's view, fn. 20 above) that the Slavonic language family enjoyed a relatively long period of equilibrium, isolated in the north-eastern reaches of Europe, and that beginning ca. 5th century CE, they experienced a protracted period of punctuation. Moreover, due to unique political and historical factors, the Slavs continued to experience punctuation events until well into modern times. Eastern and Central Europe and the Balkan peninsula have often been contested and politically unstable regions, even into the modern era.

The majority of the punctuation events experienced by the Slav tribes over the course of their history was in the form of demographic pressure; if there were any natural cataclysms with a wide-spread effect, or epidemics, we have no record of them. Those events, such as invasions or large-scale migrations for which we do have corroborating evidence will be extensively treated in Chapter 3.

We have thus far not mentioned the areal perspective on our problem, as we were concentrating on addressing the shortcomings of current theories in fully explaining language change. However, in keeping with the broader framework that we seek to apply to Slavonic, the idea of the linguistic area becomes important. A narrower definition of the term 'area' is that applied by Emeneau: 'an area which includes languages belonging to more than one family but showing traits in common which are found not to belong to other members of (at least) one of the families.' (16) Dixon's own definition is equally as valid for our purposes: 'an area which includes all the languages of each of several families (no language from any of the families being located outside the area).' (15-16) Neither language change nor language

contact are restricted to 'linguistic areas', and by the end of this work, we hope to have demonstrated that the Common Slavonic territory bore some of the hallmarks of a linguistic residual zone.

Thus, rather than viewing the end of Slavonic linguistic unity as a gradual accumulation of S-curve type changes, the Punctuated Equilibrium Model allows us to characterize the situation as one where, under some sort of catalyst event or series of events, a series of macromechanical functions were set in motion, leading to a critical mass scenario, where the linguistic unity was permanently fragmented. Again, we repeat that this does not preclude the continual workings of micromechanical processes; it seems too much to attribute to coincidence, though, that the periods of greatest linguistic 'catastrophes' coincided with the periods of greatest social and political unrest.

To summarize: if, as we have attempted to demonstrate, all of the theories of the cause of language change are either completely invalid or applicable to only limited scenarios or circumstances, what then are we left with? If the presence of system-internal mechanics does not equate with system-internal motivations, if the division between competence and performance is ephemeral and of limited, if any, use, if sound changes have exceptions, if we cannot draw firm divisions between collectives or isolate individual systems one from another, if we are not able to reify a language, and all proposed universals of change must be downgraded to the status of tendencies, where can we find the ultimate motivations of language change?

Logically, if language is in and of itself not simply a set of rules and forms, but these rules and forms in action, then surely we must look for the motivations of language change in the actual use of the language. Furthermore, if we can effectively argue that each speaker of each language possesses a unique set of rules and forms and perspectives, can we not also argue that any instance of language use is simultaneously an instance of contact? Not necessarily of dialect or language contact, as these terms are more appropriately applicable to situations where speakers of different regional or social varieties, or of different languages altogether meet and interact, but rather of linguistic contact. Croft argued the same issue from a different standpoint (87-115). Noting that speakers of the same language often rely on context for a high degree of mutual intelligibility, the point is identical: each of our linguistic systems, and the values and operations that compose them, are shaped by our perspective, by our idiosyncratic perceptions. Therefore, the argument does not seem as far-fetched as it initially might have.

This in turn brings us back to contact, between speakers of the same language, between speakers of regional and social variants of the same language, or between speakers of different languages altogether, and the implications that this has for our theory of the disintegration of Common Slavonic.

2.20 Linguistic Contact

The term 'linguistic contact' has been chosen over the more conventional 'language contact', as we wish to include several phenomena under this general

heading. When examining the decay of Common Slavonic, we are concerned with, three types of contact: contact between speakers speaking the same, or highly similar speech varieties, contact between speakers of different dialects, and contact between speakers of different languages. All are relevant at some level to our topic.

In the first instance, when speakers of the same language or variety are interacting, this is important for the maintenance of norms, as well as the propagation of innovations. This is not to imply that individual speakers may not possess the ability to speak different social registers, dialects, or languages. However, insofar as community pressure is concerned, this is where the most intense pressure would occur to adhere to the pre-existing speech habits (accents, grammatical constructions, etc.) of the community in question. It is characterized by, all other factors being equal, the highest degree of mutual-intelligibility. Speakers in this type of scenario have the least amount of accommodation to make. This type of contact can occur in any context: geographically or socially isolated enclave, urban area with higher degree of inter-community contact, etc.

The next level, dialect contact, is characterized by a higher degree of accommodation between speakers. Usually (but not always) the accommodation will be unilateral, as often one dialect will possess a higher level of prestige (at least in the perceptions of one party), or will be seen as less 'complex' or certain features less marked.⁴² Here, localisms (lexical, phonological, syntactic) will be brought into play,

⁴² 'Markedness' refers to, in this context, whether or not a given linguistic feature is 'expected' in a certain environment. Those that are more predictable or expected are less marked, and vice-versa (Matthews 218).

and, if the contact is intensive enough, it can cause dialect boundaries to shift, as 'interdialects' form. The one with the higher degree of prestige may force the other into remission. Note that 'remission' need not mean extinction. It may only imply the decrease in arenas of usage. Often, this is the first step in the extinction of a dialect (or language), or in the formation of 'interdialects'. '...[L]inguistic accommodation to salient linguistic features in face-to-face interaction is crucial in the geographical diffusion of linguistic innovations.' (Trudgill 82.)

Dialect contact can be the vehicle for innovations to spread from one speech community to another. Whether this 'causes' large-scale levelling of dialectal differences, or whether each dialect then develops the 'foreign' material in independent ways again depends on various factors.

In a dialect mixture situation, large numbers of variants will abound, and, through the process of *accommodation* [...], *interdialect* phenomena will begin to occur [...] As time passes [...] the variants present in the mixture begin to be subject to *reduction* [...] In determining who accommodates to whom, and which forms are therefore lost, demographic factors involving proportions of different dialect speakers present will clearly be vital [...] The reduction of variants that accompanies focusing [...] takes place via the process of *koinéization*.
(ibid. 126)

Trudgill concludes his discussion by noting that involved in koinéization are 'levelling' and 'simplification', whereby marked forms and minority variants are lost if they are more phonetically or morphologically complex, or kept if they are simpler. Such forms can, however, persist in various registers, i.e. the variants of different social classes (ibid.).

Language contact, i.e. the interaction of two speakers speaking different languages, or two groups, is characterized by very little mutual intelligibility, if any at all. This phenomenon, in one form or another, at one time or another, has been the subject of a vast amount of literature. Uriel Weinreich inaugurated this area of inquiry in the twentieth century with his seminal work Languages in Contact: Findings and Problems in 1953. It was here that we were introduced to the concept of 'interference': where one or more speakers of two or more languages unconsciously applied rules from languages other than the ones they were speaking at the time, producing novel effects on the languages.

The term interference implies the rearrangement of patterns that result from the introduction of foreign elements into the more highly structured domains of language[...] (Weinreich 1)

When this phenomenon attained a community-wide currency, the languages themselves started to change, taking features and processes from each other and developing them in novel and unpredictable directions.

This is the underlying concept behind the process of 'shift', where an entire community stops speaking one language, and shifts to another, simultaneously imposing rules and forms from their original language onto the systems of the new ones. Given time, these would be propagated throughout the entire system, and account for the elusive 'substrata' which can be so difficult to identify, but seemingly have had such a profound effect on many of the world's languages.

Now that we have examined, broadly, linguistic contact and three of its manifestations, we return to the idea of 'context' as discussed in §2.3. Recall that context was proposed as one of the three necessary elements (along with form and function) of a successful speech act. Not only will the effects of a contact scenario vary depending on the nature and intensity of contact, but also on the context. Context is the controlling force which determines the results of contact and the direction of change. As such, in principle the term context requires a broad definition, as the various factors coming into play in any contact scenario can be almost limitless in number.

2.21 The Role of Context in Linguistic Change

Context can encompass many things. To start with, history is a component of context. All of the events that had an impact on the political and social development of the group in question contribute to their perspective as a group, and often to the perspective of those interacting with them.

Context also includes culture. To be sure, this is an ephemeral term; it has defied precise definition to the same extent that 'language' has, and there is as much polemic regarding what should be included under the umbrella of culture (some would argue language is a component of culture) as what comprises a language. The inherited customs and world views of a group, including, but not limited to spiritual systems, kinship systems, attitudes towards individuals or collectives 'foreign' to the group and to what degree—all of these things and more mirror, if not directly influence how a community describes the world around them through language.

These are the 'enduring' aspects of context; those things which any given speaker of any given group will have inherited from previous generations and which, modified by their own experiences, they will use in classifying the world around them. Context, then, is a non-teleological, dynamic, non-systematic entity. It straddles the line between influencing the speaker or group, and being influenced by the speaker or group. Whether its role is 'active' or 'passive' depends on the source of the stimulus for whatever event is in question. It is also dependent on the magnitude of the stimulus, i.e. anything from a foreign trader calling at an isolated village in the heart of the Pripet Marshes, to a flood causing the annihilation of an entire urban community. Finally, it is dependent on the immediacy of the punctuating event, e.g. the difference between the development of Corded Ware pottery or the Tatar invasions of the 12th century.

2.22 Summary

To comprehend the causes of language change, it is not enough to make a case for system-internal, typologically motivated changes accruing over time and producing the splits in a Family Tree model which can then be neatly diagrammed by later students of historical linguistics. A full understanding of the phenomenon of language change requires three things: a) an understanding of the linguistic history, b) the political history of the group in question, and c) the culture of the group in question.

The linguistic history can be described without reference to b) or c), i.e. sound changes can be catalogued, analogy, reanalysis, and grammaticalization can be reconstructed, loanwords can be detected, etc. Equally, the history of a group can be fully comprehended without reference to the evolution of said group's language(s), and the culture can be described quite neatly and satisfactorily with only parenthetical reference to the history or linguistic history.

If description is our sole aim, then this is sufficient. However, explanation requires material to be drawn from all three branches. Therefore, on both explanatory and functional grounds, any language-specific theory of language change which does not draw heavily on the social and political history of the group speaking the language cannot but fail to achieve its mandate. As we have demonstrated in this section, that an individual structure, or system of structures exists does not mean that the system is 'self-propelled', i.e. teleological. By way of example we have only to examine 'dead'

languages. Dead languages are called this both because they are not spoken and because they do not change. They do not change because they are not spoken.⁴³

Finally, inherent to every linguistic system is a certain amount of flexibility. That the flexibility is inherent in no way requires its constant or consistent activity. Because a language changes does not mean it must do so, therefore to find the ultimate cause of both linguistic changes and language change, we must look further than the tendencies of the system. As Dixon noted, '[...T]he majority of changes are due to the diffusion of a category from a nearby language or group of languages.'

(57)

⁴³ Although they may still be *used*, e.g. Latin in the Roman Catholic Church, was used until the Second Vatican Council as the language of the Mass, and Church Slavonic, which is the liturgical language of the Slavic Orthodox Churches, but again, not spoken 'on the street'.

Chapter 3: History

3.1 Introduction

To chart the origins and development of the Slavonic peoples has proven to be a challenge of great magnitude for historians and archaeologists over the last two centuries. Unlike many of their neighbours, such as the Greeks, Romans and Hittites, they emerged onto the stage of European and Asian history comparatively late. The earliest mention of the Slavs by that name dates from the Early Middle Ages (see §3.10 for discussion of the earliest mention of the Slavs in the writings of their various neighbours), and a great deal of scholarship has gone into precisely why it was the case that such a numerous and influential group of people remained effectively 'off the radar' until such a recent time. Francis Dvornik expressed a typical sentiment regarding the development of the Slavs when he wrote that

The early history of the Slavonic nations is full of tragic incidents, of brilliant hopes, and promising possibilities which seldom found realization owing to the varying circumstances and events beyond control of the Slavonic rulers. (2)

Nevertheless, this has not daunted scholars. A vast corpus of scholarship exists dealing with all aspects of Slavonic culture and history. Archaeological excavations abound throughout Central and Eastern Europe, ancient chronicles, describing the peoples to the north and east of the Mediterranean that date as far back as the fifth

century BCE, as the earliest writings in Slavonic have been analysed and re-analysed in attempts to fathom the origin and evolution of the prehistoric Slavonic culture.

Thus, one would be forgiven for assuming that, with a history of scholarship stretching back more than a century the major questions relating to the early Slavonic culture have all been answered. This is not the case. As with other areas of scholarly inquiry, as issues are revisited using new methods and information, heretofore accepted answers are cast into doubt, and new questions arise to challenge conventional thinking and stimulate research.

The past few decades have seen a pronounced trend towards re-evaluation of established scholarship. Many factors have played a role in this trend, including the acceleration of global communications, which allows for rapid access to a vast amount of resources and data, and technological innovations, which are casting light on questions previously thought to be unanswerable. One upshot of this new direction in the social sciences and humanities has been the realization that traditional theories of culture, ethnogenesis, and philology are often rooted in essentially modern paradigms. Specifically, modern ideas regarding the definition of a nation state and/or 'race'; and the relationship between language and ethnicity, have often been used in the attempt to understand historical periods and events, groups of people and their material remains, and of course, ancient languages. To impose a contemporary worldview on peoples and events of the past can easily produce misleading results. Barford discussed this when noting the six components of an ethnic identity: '[...]a

collective name, a common myth of descent, a shared history, a distinctive shared culture, an association with a specific territory, and a sense of solidarity.' (31) This is the paradigm by which we classify both modern and ancient groups, and one which seems to belong to the nation states of more modern times, those whose members undergo a process of socialization beginning at birth, when ethnicity is assigned. Although such an attitude may allow scholars to discuss and analyze contemporary groups well enough (and this is currently under dispute; what of groups that lack one of the six necessary components, such as the Roma, who have no association with a specific territory?), Barford noted that it was exceedingly difficult to apply these six criteria to peoples of the past, who undoubtedly had radically different attitudes towards group identity (31-33).

The disciplines of history and archaeology are two fields which have benefited enormously from the developments mentioned above. In turn, recent research into the question of Indo-European origins and movements has important bearings on the issues of the origins and subsequent dispersal of Slavonic. Related matters are the effects of the geography and history of this area on the Slavonic languages, and specifically, did such factors hasten their fragmentation, contribute to their cohesiveness, or have no real effect at all? If we advance a theory of the primacy of language contact in language change, who were the PIE and Slavonic speech communities in contact with, and how did the unique factors in each situation influence subsequent events? These are among the primary issues which we seek to address, again all relating back to the core question of when, where, and why the ancestral Slavonic language disintegrated.

We have found that the conventional answers to these questions leave much to be desired in terms of precision and scope, and often rely on a high degree of assumption. This was not altogether surprising, as anyone undertaking a study of this part of the world during the timeframe in question is faced with a discouragingly small amount of primary source material until comparatively recently. Even when sources are to be had, they are not always reliable. The investigator must critically evaluate any source, and this has not always been done in the past. Despite these challenges, progress can be made in the study of the origin and expansion of Slavonic and its ancestor PIE by using modern resources and techniques.

To begin with, what exactly is meant by the terms Slavonic, Common Slavonic, Proto-Slavonic, and Pre- and Proto-Indo-European? Barford provided the following schema with which to attack the problem of Slavonic origins, and in large measure it is appropriate to a discussion of PIE as well.

[...] the term 'Early Slavs' could refer to at least four types of phenomena relating to our main types of sources:

-historical: the people referred to by early medieval (usually external) written sources as 'Slavs' (not all of course might have been, they may merely have inhabited the territory regarded by outsiders as belonging to the Slavs)

-archaeological: the people using the specific assemblages of material culture which the archaeologist associates with the Slavs

-ethnographic: the people whom historical and living tradition regards as the direct ancestors of the population now inhabiting Slavic countries

-linguistic: the speakers of the early forms of the Slav languages

These four phenomena have dimensions in different kinds of space and time, and do not always comfortably overlap. (27)

The first and third points are largely inapplicable to a discussion of Indo-European; in the first case, no historical evidence dates to this period, and in the second instance, the passage of time and the co-mingling of various groups has probably all but erased any ethnographic evidence regarding the original Indo-Europeans. Recent research in genetics has attempted to advance our understanding of IE ethnography, but it is too early to make any definitive statements, as much of the evidence gathered thus far has been contradictory (e.g. Cavalli-Sforza, and Sidrys).

For the purposes of this discussion, we have emphasized the linguistic side of the analysis. Such analysis does, of course, require frequent recourse to historical and archaeological sources. On the whole we have attempted to restrict the use of terms such as PIE or PSI to speech communities, rather than various ethnic groups. Therefore, in the technical sense, the latter term designated the reconstructed, i.e. not directly historically attested parent language of the various extant IE languages. Pre-Proto-Indo-European (PPIE) thus designates the parent language of PIE, which is

itself composed of several discernable chronological and regional strata.¹ The Proto-Indo-Europeans were those people or peoples that spoke a Proto-Indo-European dialect, and their ancestors were the Pre-Proto-Indo-Europeans. While the preceding statement seems to be axiomatic, their application generates several difficulties. In the first instance, who exactly were the Pre- and Proto-Indo-Europeans? Where did they live? Were they a racially or ethnically homogeneous group, or composed of people of diverse origins, whose only commonality was the language they spoke? If the latter was the case, what circumstances caused unrelated groups of people to adopt the same or similar languages? What were the circumstances that enabled them to ultimately dominate such vast expanse of territory? Perhaps most importantly, when can we first identify a group as PPIE or PIE, and when do we concede that that group ceased to exist? Each of these questions is considered in its turn, both individually, and in relation to our overall thesis, in the remainder of this chapter.

An understanding of the mechanisms and motivation of the evolution of the Slavonic languages entails more than an examination of their Indo-European historical and linguistic heritage. It will be demonstrated that the physical environment, that is the geography, geology and climate, had a direct bearing on the Slavonic history and culture, and ultimately, on the language of the Slavs.

The remainder of this chapter consists of fourteen more sections. Before we examine the historical events that shaped the culture and language of the Indo-

¹ See §4.3-4.9 for a full discussion of the PPIE and PIE languages.

Europeans and their Slavonic successors, we provide a brief introduction to the environmental factors, which had an impact on their evolution. Because an in-depth examination of the geographical, geological, and climatological processes that moulded the cultures of Europe, the Near East, and Western Eurasia would be enough to fill an entire volume in its own right, we have restricted the discussion of these issues to those particularly relevant to the peoples of Eastern Europe.

The next section (3.3) begins with a brief examination of the agricultural centres of Ancient Anatolia. It was from this region that farming spread into Europe, bringing with it a potential five-fold increase in population and, we believe, the Proto-Indo-European dialects. This section also describes the Secondary Products Revolution, i.e. the origin of the pastoralist-nomadic lifeway that evolved as a response to the unique environmental demands of Western Eurasia. It is almost impossible to understate the impact that the development of this lifeway had upon the history of the cultures surrounding the Eurasian steppes for millennia afterwards.

Sections 3.4-3.7 inspect the events which transpired during the second and first millennia BCE until the beginning of the Iron Age in Central and Eastern Europe. Although the Middle and Late Bronze Age was a period of consolidation for many of the Indo-European cultures, there was nevertheless much widespread instability, and populations continued to interact in a variety of ways. A hallmark of this period was the dynamic between the sedentary populations of the European and Near Eastern centres of agriculture and the highly mobile, often aggressive tribes of pastoralist

nomads inhabiting the steppes. It is also from the later centuries of this epoch that the first documentation of the peoples of Eastern Europe and the Central Asian steppes comes, in the form of scattered and vague references to tribes living beyond the borders of the agrarian civilisations of Europe, the Middle East, the Indian subcontinent, and China. These sources take a variety of forms, whether bas-reliefs from Mesopotamia, records of the early Chinese dynasties describing border clashes with belligerent nomads, or the encyclopaedic History of the Greek chronicler Herodotus.

The number and quality of documentary sources relevant to this study increases during the next period, known in the West as the Middle Ages. Sections 3.7-3.11 examine the history and archaeology of Eastern Europe beginning in approximately the sixth century CE until the disintegration of Slavonic cultural unity. From the standpoint of this work, this period is crucial, as this was the period when the name 'Slav' appeared in the histories and chronicles of the Mediterranean world. It was during this time that the Slavonic tribes took advantage of political circumstances and expanded their influence in all directions, ultimately establishing the foundations of many of the nation-states of Eastern Europe.

From this point, we move to an analysis of the evidence provided in the first five sections. Section 3.12 presents the traditional interpretation of the historical and archaeological data, with emphasis given to the work of the late Marija Gimbutas. Gimbutas was among the foremost exponents of the theory that the Indo-Europeans

were the Bronze Age invaders of Old Europe, whose culture and language spread rapidly over a vast expanse of territory due in large measure to technological innovations originating in the Secondary Products Revolution, specifically the horse-drawn chariot. Many contemporary scholars continue to adhere to this well-established viewpoint.

As mentioned previously, it is becoming apparent that this traditional model accounting for the dispersal of PIE via pastoralist nomads leaves much to be desired. Section 3.13 examines the work of Colin Renfrew and his supporters, who argued that the spread of PIE should be linked to the development and spread of the agricultural lifeway from Neolithic Anatolia. Renfrew lodged numerous compelling criticisms of the conventional migration theory, and his work seriously challenged the continued acceptance of this model. However, if Renfrew's model is to be accepted, it requires serious reconsideration of established views of the origin and evolution of PIE and its speakers. Not least among these issues is how we are to account for the presence of PIE-speaking peoples in Europe and western Eurasia several millennia earlier than previously thought.

Sections 3.14 and 3.15 consider these questions as they relate to the Slavs and Slavonic. Can we account for an IE presence in Eastern Europe since the Early Bronze Age? If this was the case, how did the later Slavonic tribes remain in obscurity until well into the Common Era? The answer to this question can be found by returning to the unique role that the physical environment played in the evolution

of East European cultures and languages, and applying the model outlined in Chapter 2. It is here argued, and will be demonstrated subsequently that minimal population growth combined with minimal language contact resulted in a high degree of cultural and linguistic conservatism. Only much later, when technology and ideas from the civilised Mediterranean cultures began to attain wider acceptance in the Slavonic heartland were the circumstances set, which allowed the Slavs to begin their own expansion phase, as documented in the Middle Ages.

	6 th millennium	agriculture reaches the Bug and Dniester basins
	5300	agriculture reaches the middle Danube
	5 th millennium	population increase in Danube, Dnieper, and neighbouring river basins
	4000	Secondary Products Revolution (pastoralism)
Cucuteni-Tripolye culture reaches wooded steppe		
horseback riding appears on Pontic steppes east of Dnieper		
(Early Bronze Age)	3400-3200	metal trade with Balkans initiated
	3 rd millennium	large-scale migrations; Carpatho-Balkan metal trade collapses
(Middle Bronze Age)	2600-2400	increased unrest; pastoralists begin to dominate agricultural communities
(Late Bronze Age)	1800-1600	invasions
	1100-900	chariot invasions of India?
	200 BCE-1 CE	Scythian invasion of Iran, Mesopotamia, and Balkans
	500-600	Hsiung-nu
	1200-1300	Turkic invasions
		Mongol Empire

Figure 3.1: A chronological outline of the history of Eastern Europe

3.2 Environmental Factors

Of central relevance to any discussion of putative environmental effects on human culture and language of the last ten millennia is the end of the Wisconsin Ice Age, which occurred approximately ten thousand years before the present. Although this event cannot be linked to the actual development of the agricultural lifeway in the ancient Near East, its effects on the history of Eastern Europe and Western Eurasia were profound. As the glaciers retreated, several important phenomena took place. First, with each passing century, the potential range of agriculture was extended northwards. As the climate warmed, the permafrost line retreated northwards; agriculture is not possible in regions where permafrost exists.

Another significant result of this ongoing global warming trend was an alteration in human migration patterns. This topic is quite complex, and technically belongs outside the scope of the present discussion, but it does bear emphasizing that relatively small groups of humans had continuously inhabited and travelled across regions previously covered by glaciers in the north of Europe and Asia since earliest times. These groups were the indigenous inhabitants of Eurasia, and it is possible that these communities survived, both genetically and linguistically as either substrata in subsequent Indo-European and Finno-Ugric-speaking areas. In rare cases, it is possible that these groups survived intact for many thousands of years, maintaining their separate identities under overwhelming demographic and linguistic pressure

from their neighbours. The Basques, for example, are thought by some to be the ancestors of the indigenous Paleolithic or Mesolithic inhabitants of Europe. Other groups, e.g. the Etruscans, may well represent other indigenous groups (Christian 34-42).

Returning to our second point, travel routes exploited by these groups were altered as ice melted and sea levels rose. Various tribes or communities were stranded as islands such as Ireland and Great Britain were separated from the mainland. Other islands shrank, or completely disappeared. An extreme example of the effects of this process is the Bering land bridge, which the ancestors of the Native Americans used to cross into North America. As the water level of the Pacific Ocean rose, the land bridge was submerged under the newly formed Bering Strait, separating these groups until quite recently.

More recently, Central and Eastern Europe developed four major climatic/vegetation zones: the 'Atlantic-Continental East European' zone, which corresponds to the mixed coniferous/deciduous forests, the 'Atlantic-Continental European' zone, which represents the drier and unforested steppes, the 'Continental East European' zone, which encompasses the semi-arid lands further to the east of the area under discussion, and the 'Transcaucasian' zone (Togenov et al. 98). Major river systems included, from west to east, the Elbe, Vistula, Danube, Dvina, Dniester, Dnieper, Don, and their tributaries. Mountain ranges of note include the Carpathians to the south-west and the Urals further to the east (Channon 19). Average seasonal

temperatures in the continental zone range from winter temperatures of about -5° centigrade to summer temperatures reaching 20° on average. Needless to say, towards the northern and southern extremes of the area, temperatures vary drastically. For example, the coldest average winter temperature in Crimea is higher than the average summer temperature in the far north of modern Russia (Togenov, et al. 100; Magocsi 6).

Despite the extremities of temperature which produced harsh winters and hot summers, the zones described above supported, and continue to support, a high degree of biodiversity. The following species are more common samples of flora and fauna throughout this vast area. Forests of oak, fir, aspen, beech, and hornbeam dominate the southern half of the region, while towards the north, woodlands consisting of mixed pine, fir, and birch are to be found. Fruit-bearing trees are also abundant, including lime trees on the northern coasts of the Black Sea, apricot trees in modern-day Belarus' and south-western Russia, as well as the area around the middle reaches of the Volga, and bird-cherry from central Ukraine southwards. Apple trees grow from the Baltic as far south as the Black Sea.

Indigenous species of avian and aquatic animals are no less plentiful across the various climate zones. Native birds include the barn owl and woodpecker, to name two, while the region is also home to mink, polecat, hare, muskrat, European bison, boar and elk. In the rivers to the north live whitefish, river eel, pike, perch, sheat-fish,

and carp. The Black Sea, famous from the fifth century BCE for its abundance of fish, is home to sturgeon, carp, pike, perch, and beluga.

Still an impediment to movement, trade, and military conquest, but less so than the forests were the mountain ranges of Eastern Europe. Passes through the various ranges allowed steady, if not altogether free, access to new lands. By and large, the Greek-speaking colonies tended to be established on the southern shore of the Crimean peninsula, separating them from the less developed regions to the north, on which their commercial wealth depended. It was often, though not always, the case that cultural and linguistic borders corresponded to geographical features.

Rivers were another important geographical feature that influenced relations between cultures. In this case, instead of posing a barrier to movement, they served not only as readily identifiable boundaries, but also as lines of communication. Classical authors wrote of the aptitude of the natives of the region at using the rivers to their benefit, whether driving over the ice in the winter, or using them for rapid movement or concealment in the warmer seasons, e.g. Herodotus (228).

In addition to climatic and topographical features influencing the development of the cultures indigenous to the area, there are important geological factors to be taken into account. Whereas the soil in the southern reaches (steppe and steppe-forest zones) is renowned for its fertility (*chernozem* as it is known in East Slavonic), as on

travels further north, the soil changes to clay and sand. As well, there are very few deposits of flint (a stone used by prehistoric people to make various kinds of tools) to be found in most regions. Until the second millennium BCE, this material had to be imported into the area. Copper deposits were also few and far between; the most significant lodes were in the Ural and Caucasus mountains, but smaller, lower-quality ores from sandstone deposits were available in the middle reaches of the Volga basin, in the mid-Donets area, and in very small and isolated deposits along the Dniester. Lastly, tin was not locally available anywhere in Central and Eastern Europe, so the earliest bronze was alloyed with other materials, such as arsenic (Sulimirski 3-6).

The paucity of the above-mentioned materials had a considerable effect on local economies in Central Eastern Europe. Those communities that were most isolated existed with a very low level of technology for a very long time; indeed, the Finnic-speaking tribes of what is now northern Russia are considered to have retained their hunter-gatherer-based economy for centuries after their Baltic and Slavonic neighbours had advanced technologically and economically. However, trade routes had crossed the forests of eastern Europe since time immemorial, and it seems likely that desire for more reliable or more technologically advanced implements kept the trade going steadily that penetrated the entire area.

The role played by geography goes beyond simple economic or demographic influence. For example, in the Balkan peninsula, where various tribes established themselves after occupying provinces of the Byzantine empire, the environment and

topography served either to hasten or retard cultural assimilation. As an example, numerous Slavonic-speaking enclaves became deeply entrenched at this time, and proved resistant to the best efforts of the imperial authorities to assimilate them, either by direct force or hellenization, which used the Greek language, Christianity, and generally superior material culture to influence foreign peoples and bring them under direct imperial control. However, the communities that proved most difficult to influence for the Byzantine government were often those that were isolated in the mountainous interior of the peninsula. In general, one can safely assume that the speakers of Greek who inhabited the hinterlands of these occupied provinces were probably assimilated into the Slavonic-speaking population at least temporarily. If not completely absorbed, then it stands to reason that any Greek settlements probably contained bilingual elements, e.g. St. Cyril, raised in the province of Thessaloniki, and bilingual in Greek and a local Slavonic dialect, if for no other reason than simple regional economics.

There is ample written and archaeological evidence from contemporary sources proving that the Pontic steppes and East European forests were integral to the economies of the Mediterranean civilizations. In addition to being an expanse of land that merchants and explorers of antiquity crossed, either by choice or necessity, the region provided the bulk of the raw materials for several Greek city-states, and later the Byzantine empire. Goods such as wax, furs, honey, amber, as well as foodstuffs including fish and corn were regularly traded for luxury items produced further south or east since before the establishment of the Greek Black Sea colonies in the eighth

century BCE (Magocsi 28). Eastern Europe was also a major source of slaves for the Mediterranean civilisations.

The geography of Eastern Europe is arguably one of the root factors of the 'cultural conservatism' that is characteristic of the region even to the present day. Perhaps the most effective barrier to large-scale population shifts was the vast forests and marshes that covered much of the land. The strategic advantages offered by dense woodland to an opponent were recognized by Justinian, who cleared much of the land inhabited by the Tzani, a Transcaucasian tribe, as part of his effort to subjugate the people of the area (Obolensky, Byzantium and the Slavs 304-5).

3.3 The Neolithic to the Early Bronze Age

Many points on the prehistoric timeline could be chosen as a beginning point for this discussion, but for reasons which shall become clear shortly, we begin with the introduction of agriculture to central and eastern Europe. Small groups of people had been wandering across the entire region for millennia, subsisting on a hunter-gatherer economy. However, one of the most, if not the most, important events in the history of the region was the so-called 'Neolithic Revolution', a term first coined by the Australian archaeologist V. Gordon Childe in the 1930's.

The term Neolithic Revolution refers primarily to the development of agriculture, which dates back approximately ten thousand years before the present. Among the earliest centres (if not the earliest) of farming in the Near East was Jericho, and it was from the Fertile Crescent that the practice of farming and animal husbandry spread to the rest of the Middle East, North Africa, Central Asia, and most importantly for this discussion, to Anatolia and then to Europe. The first cereals to be cultivated in these areas were varieties of Emmer wheat, and two types of barley: einkorn and six-row. Among the first animals to be domesticated were cattle and pigs (Renfrew, Archaeology and Language 146). The earliest farming communities in Anatolia seem to have been concentrated in a large area north of the Taurus mountains, in the south-central regions of Asia Minor. Two notable sites dating to this period are Hacilar and Çatal Hüyük. Other early farming centres were found further to the east, and include such sites as Hassuna, Jarmo, and Matarrah. From this area, the practice of farming spread first to the islands of the Aegean, and then northwards into the Balkan peninsula along the Aegean and Black Sea coasts (ibid. 170-171).

The processes by which agriculture spread to these areas has been one of the fundamental questions faced by archaeologists studying the Neolithic for the last century, and has undergone several notable revisions. Marija Gimbutas recently noted that

The hypothesis that a ready-made agricultural complex was imported to Europe from the Near East is no longer acceptable...The process was long

and not uniform, and was dependent upon various geographical and natural conditions. (Civilization of the Goddess, 3)

Nevertheless, the term 'Neolithic Revolution' remains in use, even if the interpretation of the physical evidence advanced by earlier scholars has been abandoned.

It seems, from archaeological findings, that agriculture was restricted to southeastern Europe for a relatively long time. North of the Pontic steppes, the poor soils and extreme climate inhibited the establishment of communities subsisting on large-scale agricultural economies often as late as the first millennium BCE. Hunter-gatherer type communities survived very late, sometimes as the sole inhabitants of a given area, but other times existing co-territorially with, but discreet from the farming communities. As agriculture spread further and further into Europe, local adaptations emerged that suited the unique needs of the local environments. As Gimbutas explained,

'The progressing differentiation into many cultural units during the beginning Bronze Age and the variety of ceramic styles and the rapid changes of forms of artifacts [sic] were caused by mixtures of people, the growth of metallurgy, and trade.' (Bronze Age Cultures 185)

These earliest agricultural communities in eastern Europe tended to be established in river valleys in the Balkans, e.g. the Karanovo culture of Bulgaria. By

the 6th millennium BCE, farming had reached the Bug and Dniester basins via Moldavia, approximately one thousand years after it had been adopted in Central Asia. One author argued that the relatively rapid increase in population brought about by agriculture triggered migrations into the Danube basin and later into the Pontic steppes:

Here, too, agriculture almost certainly appeared through migration. Driven by population pressure in the Mediterranean world, and drawn by the new opportunities created as climates warmed from ca. 5500 BCE, neolithic [sic] populations from the Balkans began to spread north into Eastern Europe in the 6th millennium. (Christian 74.)

Renfrew quoted statistics that claimed that 'The distance of local migratory activity—that is the distance of the movement of settlement, which is random in direction—is taken to be 18 km for each generation of 25 years.' (Archaeology and Language, 129) Other experts, however, are reluctant to support the idea of a migration, either initially, i.e. of Neolithic Anatolian farmers into Europe, or in the case of the Bronze Age farmers. For example, Champion argued that '...it is highly unlikely that the population of prehistoric Europe had grown to such an extent...that migration should have been the preferred solution to crisis at any time before the 1st millennium.' (qtd. *ibid.*, 140)

Regardless, although agricultural methods of food production were beginning to spread northwards, the concentration remained in the south, around the Black Sea, on the steppes, and in Transcaucasia, with the earliest farming communities in the

region north-east of the Carpathians (Sulimirski 59). Moving northwards and eastwards from the Pontic steppes and Central Europe, the Neolithic Revolution would later become a 'technology of pastoralism' (Christian 81). Sheep, goats, and cattle had all been domesticated by ca. 6000 BCE. This would seem to be a result of the fact that there was probably not a 'wave of advance' that extended beyond the steppes; both the forest and the steppes were difficult to farm using Neolithic technology and methods (ibid., 75). Regarding farming in the forests, this was a labour-intensive endeavour, as the land had to be cleared before crops could be planted. It seems to have been the case that regardless of the amount of effort required to fell trees, swidden farming was the preferred method in Central and Eastern Europe for quite some time. This was basically the practice of felling the trees in a given area, and burning them to fertilize the soil. After a limited number of growing cycles, the practice was repeated on an adjacent piece of territory (ibid. 329). In terms of farming the steppes, although the lands north of the Black Sea boast the largest tracts of the best soil in the continent, it was extremely difficult for the ancient inhabitants of the region to exploit it, because the turf was too thick for the primitive scratch ploughs (Sl. *ralo*) used at this time to cut through the sod. Not until the development of more advanced ploughs with blades capable of slicing the turf (Sl. *soxa*).

Because agriculture facilitates a rapid population increase—more food can be produced by fewer people, ergo the more food the more people, etc. (Renfrew, Archaeology and Language 126-127)—the areas which were not conducive to primitive agricultural methods of farming remained sparsely populated for quite some

time. Farming techniques gradually filtered north, at times replacing more primitive methods of subsistence, and at other times not. Interestingly, in some areas there was no Neolithic tool culture. For example, the earliest farmers in Transcaucasia and the steppe regions used copper implements already in the mid- to early third millennium BCE (Sulimirski 56-7; cf. Cross 12).

Contributing to the increasing cultural diversification mentioned above were various unique local adaptations to the circumstances that Neolithic Europeans were faced with. It has often been assumed that hunter-gatherer populations tended to be relatively mobile, requiring large amounts of space in which to hunt and forage, whereas members of farming communities were more inclined to be sedentary. Bailey offered convincing proof that this was not always the case. He concluded that

[...T]he landscape of South Eastern Europe in the Neolithic and Chalcolithic (6500-3500 B. C.) was dominated not by continuously occupied permanent settlement but by mobility and flux. (42)

Examining core samples from various sites in south-eastern Europe, he determined that in the case of farming communities, there were often strata almost or entirely bereft of human remains or artefacts, indicating frequent periods of abandonment (ibid. 44). Conversely, he drew on data collected from several hunter-gatherer settlements, where the horizons indicated continuous habitation. Bailey identified two reasons for this phenomenon: in the first instance, as noted above, early farming communities in Europe were often established on river terraces. Such communities were often subject to flooding, and thus frequent, and perhaps prolonged moves to

higher ground would have been required. Secondly, the Neolithic inhabitants of Europe did not rely solely on agriculture, but also raised livestock. The practice of transhumance would have necessitated seasonal journeys between pasturelands, thus leaving settlements abandoned for entire seasons (ibid. 47-48).

Concomitant with the rapid increase in population and wide ranging cultural transformations brought about by the introduction of agriculture into Eastern Europe and Western Eurasia was the establishment of vital networks of commerce linking 'a vast expanse of central and northern Europe' (Gimbutas, Bronze Age Cultures 46) with the Near East and the Caucasus. The Late Helladic (or Mycaenean) culture of Greece as well as the Únětice culture of central Europe (consisting of areas of central and eastern Germany, western Poland, the western regions of the Czech Republic, and lower Austria) were engaged in active trade with cultures further to the south and east, including the British Wessex culture. Bronze implements and amber were traded in large quantities throughout this area (ibid., 69).²

This initial expansion phase concluded in the 4th millennium BCE. While the reasons for this are not entirely certain, the population swell and subsequent demographic pressure that Christian mentioned would certainly have contributed to increased instability. It was during this period of instability that several signal

² Other characteristics of this archaeological culture were flat grave inhumations, and the orientation of the metal industry towards martial, rather than domestic purposes (<http://encyclopedia.thefreedictionary.com/Unetice%20culture>).

developments, which were to have profound historical and cultural ramifications for millennia afterwards, occurred.

3.4 The Middle Bronze Age, the Late Bronze Age, and the Classical Period

As outlined above, the introduction of agriculture into Europe via Anatolia set off a chain reaction of events of profound importance. Not least of these events was the Secondary Products Revolution, which was the catalyst for the development of pastoralism on the steppes of Eastern Europe and Western Eurasia. The geographic limitations on farming are important to bear in mind, as they were intimately related to this phenomenon. This term refers to the increased reliance on animals and animal products that was required in the harsher climates of the steppe zones of Western and Inner Eurasia. Christian identified two versions of this practice. In the first manifestation, livestock were used primarily for traction; the animals were either ridden or used to pull carts or chariots. The second form that the Secondary Products Revolution took was the harvesting of blood, milk and/or hair from the animal without slaughtering it. Among the domestication of various species, perhaps none had such an impact on the history of the region as the domestication of the horse. Christian noted that

Above all, it is the use of horses for transportation and warfare that explains why I.E. pastoralism proved the most mobile and militaristic of all major forms of pastoralism. (85)

Consensus has yet to be reached on the precise dates of this occurrence, but from the available evidence, it seems likely that horses were first used for transportation by the Sredniy Stog culture of eastern Ukraine ca. 4000 BCE (ibid. 83-84.). This culture was found in the mid- to lower Dnieper basin, and there is ample evidence that these people were more mobile than their predecessors. Also, it is traditionally held that this period marks the advance of the speakers of PIE into Europe and Central Asia. There were several important results of the development of horse pastoralism. Christian discussed the impact of pastoralism extensively, noting that '[...]with the appearance of pastoralist societies there appear large areas which share similar cultural, ecological, and even linguistic features', and drew attention to the fact that, all else being equal, pastoralists must occupy larger areas of land to secure the same resources as farmers (ibid. 86).

This was a key factor contributing to the state of demographic flux during the mid Bronze Age was the adaptation of the pastoralist societies to their harsh conditions.

Pastoralism lacks the cultural checks to population growth common in hunter-gatherer societies...In arid environments that can support only limited populations, such demographic behaviour inevitably leads to periodic over-population, even at population densities that are low by the standards of the agricultural world. (ibid. 87)

Marija Gimbutas devoted much attention to the events of the 3rd millennium. In her 1991 work entitled The Civilization of the Goddess, she detailed the steppe invasions and their impact on the agricultural communities of south-eastern Europe. Drawing attention to several notable phenomena, she concluded that the early Bronze Age civilizations of Europe were effectively exterminated by the pastoralists, whom she referred to as the Kurgan culture (based on their distinctive funerary practice; see below, §312). She reckoned the beginning of the influx to have been approximately two millennia earlier.

The collapse of Old Europe coincides with the process of Indo-Europeanization of Europe, a complicated transformative process leading to a drastic cultural change reminiscent of the conquest of the American continent...Their [i.e., the Kurgan peoples'] first contact with the borderland territories of Old Europe in the Lower Dnieper region and west of the Black Sea began around the middle of the 5th millennium B. C. A continuous flow of influences and people into east-central Europe was initiated which lasted for two millennia.' (Gimbutas, Civilization of the Goddess 352.)

In her schema, these people originated on the western steppes of Eurasia, between the ancestral territories of the Finno-Ugric, Semitic, and Caucasian peoples. As evidence of the disparity between the cultures of south-eastern Europe and the steppes, she noted that weaponry did not appear in Old European graves until ca. 4500-4300 BCE, and also that before this time there were no hill-forts in the region.

Gimbutas identified three waves of Kurgan influence into Europe from the steppes. The first wave occurred ca. 4400-4300 BCE, at which time evidence appears among Kurgan sites of the establishment of a warrior elite, a horse cult, and the practice of suttee (the ritual suicide of the widow of a deceased male, usually someone of some status) (ibid. 361). Interestingly, the Byzantine military manual Strategikon made reference to the survival of this practice among the Slavonic tribes five thousand years later. The practice was common among many IE cultures, which could be taken as evidence that it was a shared social retention.

Their [i.e. the Sclaveni and Antae) women are more sensitive than any others in the world. When, for example, their husband dies, many look upon it as their own death and freely smother themselves, not wanting to continue their lives as widows. (Dennis 120)

It is important to note, though, that although a warrior elite may have been established, it was probably too early to speak of the emergence of a full-scale social hierarchy, i.e. a class system. As Christian pointed out

Inequalities of wealth and rank...have probably existed in most pastoralists societies, but except in periods of military conquest they are normally too slight to generate the stable, hereditary hierarchies that are usually implied by the use of the term 'class'. (86-87.)

The second phase of the Kurgan invasion was dated to ca. 3400-3200. During this period, the invaders were thought to have penetrated further into Old Europe, heading from southern Ukraine to the lower reaches of the Danube. Gimbutas

interpreted the evidence to indicate that this was a period of socio-cultural hybridization between the indigenous inhabitants of the region and the invaders, a sort of cultural 'marble cake' (Civilization of the Goddess 371.). The third and final wave of Kurgan expansion, 'a massive infiltration that caused drastic changes in the ethnic configuration of Europe' (ibid. 384) took place ca. 2600-2400. Gimbutas' characterization of this period might seem somewhat exaggerated, nevertheless the archaeological evidence does bear out the claim of relatively large and prolonged waves of migration into Europe from the steppes. Christian commented that

The scale of the migrations of the early 2nd millennium, and the uniformity of the steppe bronze cultures that appeared in their wake in the western and central steppes, suggest the possibility that there took place large-scale conquests, organised, presumably, by tribal or supra-tribal alliances of pastoralists. (102.)

Environmental factors may have played a crucial role in the turbulence of this period; evidence suggests that a prolonged decline in rainfall caused increased competition for resources (ibid. 92-93).

Subsequent to this period agriculture continued to spread northwards, and all but the most inhospitable forests of the far north of Europe were home to scattered communities subsisting either completely or partially on farming. Again, environmental factors probably were at the root of this, as the climate seems to have gradually turned warmer. There was also a significant increase in commerce throughout Eastern Europe and Western Eurasia. Pottery, tools, weapons, and other

items were traded or obtained by other means all over the region. Although commercial networks had existed for some time, cf. above, where flint had to be imported into Eastern Europe, increased trade originating from the eastern Mediterranean facilitated the flow of new materials, goods, and ideas into the region. The waterways made famous by the Varangians in later centuries were already being explored by this time. Much material evidence has been excavated from this time all over the region, from the Kyul-Tepe I culture in southern Transcaucasia and the Iranian border, to the Danube I and Southern Bug cultures farther north and west. Furthermore, the barrows of the Maikop culture of Transcaucasia and the Caucasus are the first evidence we have of the development of a social hierarchy in the area. The riches contained in these tumuli suggest that the peoples of the area had evolved from the primitive 'egalitarian' organisation to a more stratified system (Sulimirski, 145). Some authorities estimate that as much as sixty percent of the metal goods manufactured in the farming regions of Europe ended up in the barrows of the elite.

Commencing towards the end of the Bronze Age, traders from the city-states of Greece and Asia Minor began to establish links with Eastern Europe, and explored far inland up the numerous rivers that laced the region. Despite the fact that metal, which these peoples were primarily interested in, was in scant supply, many outposts were established—the natural wealth of the region was soon to become famous in the writings of the Greek historian Herodotus. The trade links that had been established

over the previous centuries ensured that the introduction of bronze-working³ caught on very quickly in this part of the world. Until this point, many of the goods of foreign origin that have been excavated had come from the west and north, but about this time influence, whether simply material, or in the form of population shifts, began to come from the east and south west. Some scholars even link the increase in goods from modern-day Iran to the 'proto-Scythians' (Obolensky, Byzantium and the Slavs 314).

In contrast to the paucity of metals in Eastern and Central Europe, the area east of the Ural mountains was rich in various metals, not least of which was iron. Throughout the second millennium BCE iron was used in the manufacture of various implements all over western Asia. However, iron implements were virtually unknown from this period north of the Caucasus. Single objects of various sorts have been discovered which date from approximately the eighth century BCE, but iron was not commonly used in Eastern Europe until the sixth century BCE (*ibid.*; cf. Cross 12, where the author asserted that by 900 BCE there was a 'fully developed Iron Age culture' in Eastern Europe.)

By the thirteenth century BCE, Finnic and Turkic tribes had, according to some interpretations of the physical evidence, begun to expand from the east. Either the aboriginal inhabitants of Siberia were displaced by incoming peoples, or they

³ As mentioned above, the majority of bronze artefacts of East European origin dating from this period were fashioned out of an alloy of copper and arsenic, and are thus of lower quality than artefacts manufactured elsewhere, e.g. Greece or Asia Minor.

changed their method of subsistence entirely. By the second century CE, the entire Siberian region had come under the influence of these cultures. At this time wide commercial links developed between metallurgical centres, such as they were, in Eastern Europe, and the lands east of the Ural mountains. These networks were spread as far afield as Scandinavia, East Prussia, Eastern Europe, and possibly as far away as India (ibid. 390).

Material remains of Scandinavian colonies have been found as deep into modern-day Russia as the middle Kama and Volga basins. Furthermore, recent archaeological finds in Sweden seem to indicate that goods from as far east as China could be found in this part of the world at this time (ibid.; Lawrence 27). In light of the increasing penetration of Aegean merchants from the south, the movement of goods across the central parts of the region, and the Scandinavian influence from the north-west coupled with the Finno-Ugric and Turkic influence from the north-east respectively, the picture that emerges is not that of the cultural backwater that has pervaded western scholarship for decades. Indeed, as later in the first millennium CE, the region was an important cross-roads between Western Europe and Asia.

3.5 The Cimmerians

The first group of steppe invaders mentioned by name was the Cimmerians, who occupied parts of Eastern Europe from approximately 1150-750 BCE. Aside from their name, ancient sources provided little more information. They were often

confused with their successors, the Scythians. (ibid., 396; cf. Schenker, Dawn of Slavic 10, 11, 16.) Some scholars consider them to have been of Indo-Iranian origin (Magocsi 26-35), while some support the view that they were an eastern branch of the Thracian sub-family of the Indo-European tribes (Cross 11). They were first mentioned by chroniclers during the reign of Sargon II (722-705 BCE). More notable battles included the Cimmerian assault on Urartia (south-west Transcaucasia) in 714, the conquest of Phrygia in 696-695, and the capture of Sardis in 652 (Sulimirski 395-6). Of the scant literary references we do possess, little of use can be gleaned. One of the earliest was provided by Homer:

All day long her sails were full as she held her course over the sea, but when the sun went down and darkness was over all the earth, we got into the deep waters of the river Okeanos, where lie the *demos* and the city of the Cimmerians who live enshrouded in mist and darkness which the rays of the sun never pierce neither at his rising nor as he goes down again out of the heavens, but the poor wretches live in one long melancholy night.
(Odyssey, XI)

Herodotus, writing in the fifth century BCE, when describing the Scythians, mentioned the Cimmerians by name:

'For the Scythians, as I have said before, ruled upper Asia⁴ for twenty-eight years; they invaded Asia in their pursuit of the Cimmerians, and ended the power of the Medes, who were the rulers of Asia before the Scythians came.' (History, IV, 11)

⁴ Herodotus used the term 'Asia' to designate the eastern highlands of the Persian empire.

More information about the Cimmerians came from ancient Middle and Near Eastern sources, specifically Assyria. Records exist of clashes between the Assyrians and the Cimmerians in the eighth century BCE. What little can be gleaned from both Greek and Oriental sources indicates that the Cimmerians were familiar with the horse, and used it not only as a beast of burden, but also for riding. The references seem to indicate a nomadic-pastoralist economy. Gimbutas remarked that

Lingering traditions of the people who lived around the ocean [i.e. the Black Sea] and Cimmerian names were not the only remnants of the Cimmerians. Their cultural traditions became an integral part of the later Scythian culture. (Bronze Age Cultures 517)

Excavated evidence indicates that the Cimmerians relied heavily on the North Caucasian metallurgical cultures (ibid. 479).

3.6 The Scythians

More information is available on the group who displaced the Cimmerians, the Scythians. Technically, the term 'Scythian' refers to one branch of a large and relatively homogeneous cultural complex known as the Saka. The Saka can be divided into three sub-groups: the Hamavarga ('those who made soma'), who occupied the territory of Ferghana, the Tigraxanda, who were centred in Sogdia, and the Western Saka, or Scythians. The Scythian culture occupied a vast expanse of territory, stretching from Mongolia to Ukraine. Their power centre seems to have been eastern-central Kazakhstan/southern Siberia.

The Scythian material culture brought several innovations from the steppes into the European, Central Asian, and East Asian spheres. Among the most important of these was the compound bow. The distinctive Scythian variety, which had a much greater range than anything previously encountered before the 9th century BCE, was a development of older varieties seen first in the 3rd millennium in Mesopotamia. Scythian artisans worked in iron, bronze, and gold. Luxury and decorative items produced by the Scythians tended to be of an 'oriental' style, and depicted animals that were not thought to have inhabited the steppes at this time. From the late 2nd-early 1st millennium BCE onwards, the nature of burial sites excavated has led archaeologists to the conclusion that the Scythians were developing systems of rank and social hierarchy (Christian 124-130).

Although very active in the Middle and Near East, the Scythians were eventually repelled by the Medes and forced back into Europe, where they remained for quite some time. Assyrian chronicles mentioned clashes with *Gimmirai* (Cimmerians) and *Ashguzai* (Scythians) (ibid. 133). Scythian kurgan burials began to appear in the wooded steppes of the Dnieper basin from ca. 650 BCE. Other sources mention Alexander the Great battling Scythian forces in 325 BCE (Cross 12), after which the Scythian tribes were united under Atheas and fought as allies of Alexander (Christian 136).

From the writings of Herodotus, who had lived in the Greek colony of Olbia on the Black Sea coast, we know much of the ways of the Scythians. The fourth book

of the History is devoted to an account of the customs of the Scythians and their interactions with their neighbours, and contains a immense amount of information about them. The chronicler described them as 'not...tillers of the ground, but a pastoral race.' (IV, 2) He detailed their three-tiered social system, consisting of the 'notables' and royalty at the top, then farmers, and ploughmen at the bottom. Gimbutas considered these Scythian ploughmen to have been the Proto-Slavs (The Slavs, 46-48).

Intriguingly, Herodotus also described a group of people named the Budini. The following passages dealing with these people and their neighbours are extracted from the fourth book of The History.

[...T]he Budini are a great and populous nation, the eyes of them are all very bright, and they are ruddy. They have a city built of wood, called Gelonus. (IV, 108)

[...F]or the Geloni are by their origins Greeks, who left their trading posts to settle among the Budini, and they speak a language half Greek and half Scythian. But the Budini do not speak the same language as the Geloni, nor is their manner of life the same. (ibid.)

The Budini are indigenous; they are nomads [...] the Geloni are farmers, eating grain and cultivating gardens [...] they are altogether unlike the

Budini in form and coloring. Yet the Greeks call the Budini too Geloni;
but this is wrong. (IV, 109)

Their whole country is thickly wooded with every kind of tree; in the
depth of the forest there is a great wide lake and a marsh surrounded by
reeds. (ibid.)

It is extremely inviting to identify the Budini with the ancestors of the Slavs. To
make such a claim without further evidence would be dangerous; at this point, it
would be specious to advance any claims other than that the Budini were quite
possibly Indo-European, given the details of their lifeways that Herodotus provided.
This is, however, the view of Zbigniew Gołab, as developed in a series of articles and
a monograph. He definitively identified the Budini and Neuri as the ancestors of the
Slavs. 'The oldest historical references about the Proto-Slavs...are undoubtedly
found in the work by Herodotus...under the ethnica Νευροί (**Nervi*) and Βουδῖνοι
(**Bydb*) (Gołab, 'The Ethnogenesis of the Slavs 139)⁵ Later in the same article, Gołab
reconstructed **Nervi* from PIE **nerv-* 'vital force', and **Bydb* as a tribal name from
the PIE verbal root **b^heyə-* 'to exist, to grow' (137; Watkins 11). We are not in
disagreement with Gołab regarding the probable presence of ancestors of the Slavs in
this region at this time, but at this point it is difficult, as noted above, to make any
definitive claims regarding the accuracy of Herodotus' ethnonyms. Christian noted
that several contemporary researchers have identified the site of Bel'sk as the most
probable location of Gelonus.

⁵ Incidentally, Gołab accepts Gimbutas model of the Indo-Europeanization of Europe.

Regardless, the situation described by Herodotus is corroborated by the archaeological evidence. Following their military defeats and the accompanying shrinkage of their political influence, the Scythians seem to have been either assimilated by the indigenous populations of the areas that they occupied, or to have been displaced and scattered, a trend that repeated itself over and over again in this part of the world (Christian 134).

3.7 The Greek Colonies

At the same time as the Cimmerians and Scythians occupied the Eastern European steppes and forest steppes, i.e. the 1st millennium BCE, another important influence was establishing itself from the south. As mentioned earlier, merchants from the Aegean had long been exploring the waterways and coastlands around the Black Sea in search of metals, raw materials, and markets for their goods. Starting from the eighth century BCE, refugees from Greece and Asia Minor began to establish permanent settlements along the Black Sea coast, especially in Crimea. According to archaeological evidence, these permanent colonies were not carved out of the wilderness, but established in pre-existing settlements (Sulimirski 403). It is probable that these settlements had been well-known points of contact between Mediterranean traders and the indigenous population for many centuries; indeed, early evidence of agriculture has been found in southern Ukraine, and the climate is hospitable compared to the rest of the region. The earliest of these Black Sea colonies to be established were Tiras, Olbia, Cherson, Theodosia, Panticapaeum (also known as Bospor), and Phanagoria. They were located at the mouth of the Dniester, the mouth of the southern Bug, south-western Crimea, central Crimea, the west bank of the

Straits of Kerč, and the east bank of the Straits of Kerch, respectively. Following the model of their predecessors in the Aegean, each functioned as an independent city-state for much of its history, with varying degrees of independence. The most notable union of the colonies occurred in 480 BCE—the establishment of the Bosporan Kingdom, when the cities near Kerch were brought into union under the leadership of the rulers of Panticapaeum. At the height of its power, the Bosporan Kingdom stretched from the eastern shores of the Sea of Azov to the mouth of the Don, and comprised all of Kerch and Taman. The Bosporan Kingdom was relatively short-lived, and the region remained effectively fragmented until its annexation by the Romans in 63 BCE (Magočsi 28-30).

These colonies played a major part in the economy and history of this region. They tended to act as a middle point for trade in slaves and raw materials heading to the Mediterranean and beyond, and also as a mid-point in the trade routes from the north and Asia. In addition, they acted as a stabilizing influence, where the prospect of wealth from trade rather than conquest induced various peoples moving over the area to settle down. Finally, they acted as a focus of culture, disseminating ideas from the 'civilised' world of the south to the 'rougher' regions of the north. In his description of Gelonus, Herodotus provided a prime example of this phenomenon.

Again, it must be stressed that these colonies did not begin trade with Eastern Europe, merely accelerated it. Many of the nomadic peoples coming into the area from the east quickly realised the wealth to be had from trading such things as grain,

wax, honey, furs, and slaves to the Greeks in return for the manufactured goods of the Mediterranean, which included such items as olive oil, wine, jewellery, textiles, and other luxury goods. A hallmark of the history of this region is the displacement of one group by another from the hinterlands of central Asia with the purpose of taking over the lucrative trading privileges with the Greeks and later the Romans. Presumably, this was not restricted to historical times, but can be argued with support from previously-mentioned archaeological finds indicating a wide-ranging trading network through the region from the Stone Age onwards. Later, the emperors of the Eastern Roman Empire realised the importance of encouraging allies to settle in the area, and went to great pains to maintain 'buffer states' along the coast of the Black Sea.

3.8 The Sarmatians

The Scythians were displaced by the Sarmatians, who arrived ca. 250 BCE. The Sarmatians, like the Scythians (and perhaps the Cimmerians) before them were thought to belong to the Indo-Iranian branch of the Indo-European peoples. They were subdivided by contemporary chroniclers into three groups: the Roxolani, the Alans, and the Antes.⁶ Their arrival dates to about 250 BCE, and lasted until approximately 250 CE. As with their predecessors, they first entered the region in search of plunder, but eventually settled down to take advantage of the more lucrative commerce that continued to operate in Eastern Europe. Conventional theory holds that sometime during the period when the Sarmatian tribes controlled the steppes, the

⁶ Some Classical and Medieval chroniclers considered the Antae/Antes to be Slavonic.

Slavs began to expand out of their northern homeland. Three and a half centuries after the Sarmatian presence receded, the tribes living in north-eastern Europe were mentioned by name.

3.9 The Early Slavs: Some Preliminary Remarks

It has been the custom in discussions of Central and Eastern European history to place discussions of the Early Slavs at this point in the chronology: immediately after the Avar incursions into Europe and preceding an account of the next major steppe power to emerge—the Khazars. The origin of this practice, we believe, was a result of the fact that the first reliable mention of the Slavs by name dates to the 7th century CE. As with the peoples of preceding periods, certain groupings of material culture have been designated by archaeologists as corresponding to the remains of the Early Slavonic cultures of Central and Eastern Europe. This has often proven especially vexing to scholars studying the origins of these peoples, as the assemblage of artefacts thought to represent the Early Slavonic presence displayed a markedly lower level of technological development and aesthetic sensibility than that of most of their neighbouring cultures. Such terms as ‘generally nondescript’, ‘baggy and formless’ (referring specifically to pottery styles), ‘austere’ (Barford, 64, 65, 82), ‘unsophisticated’, ‘coarse’ (Gimbutas, The Slavs 110, 125) and ‘unrefined’ (Schenker, Dawn of Slavic 2) were among those used to describe the artefacts produced by the peoples inhabiting the northern slopes of the Carpathian mountains during the first half of the 1st millennium CE.

3.10 The Early Slavs: Review of Primary Sources

Returning to the issue of primary sources, many scholars consider the first dependable mention of the Slavs to have been by East Roman, Byzantine, and Carolingian chroniclers, i.e. that the tribal designations used by the writers actually referred to speakers of Slavonic languages. However, significantly earlier references to peoples inhabiting various regions of the forests of Central and Eastern Europe, or the forest-steppe zones of Ukraine exist, and the names are often tantalizingly similar to more recent tribal names, prompting some scholars to take the position that there was some awareness of a Slavonic presence north of the Carpathians dating back to the Romans. Two such tribal designations are the names 'Anti' (later Antes) and 'Venedae'. Herodotus was the first to mention the Venedae, and placed them on the northern shores of the Adriatic Sea (cf. modern Venice) (Schenker, Dawn of Slavic 3; Gimbutas, The Slavs 62). Another early reference to the Venedae comes from Ptolemy's Geography of the 2nd century CE in which the author described the inhabitants of 'Scythia', i.e. the Pontic steppes. He listed the races of the 'greater' and 'lesser' Venedae, among whom were the 'Soubēnoi' (Lacus Curtius, Ptolemy's Geography, III, 5, Gimbutas, *ibid.* 58; Gindin 46-62). Later, (V, 8) Ptolemy mentioned another group that modern scholars have attempted to correlate with a Slavonic group. '...[B]etween the Keraunian mountains...and the river Ra live Orineoi, Valoi, Serboi...' Gimbutas, who cited this entry, equated the Keraunian mountains as the north-eastern foothills of the Caucasus, and the river Ra as the Volga (*ibid.* 60).

Two Roman authors, Pliny the Elder and Tacitus, also mentioned the Venedae. Incidentally, spellings of this term differ slightly from author to author: Venedae, Venedi, Veneti, and Venethi are all attested. Tacitus was rather harsh in his description of the Veneti:

As to the tribes of the Peucini, Veneti, and Fenni I am in doubt whether I should class them with the Germans or the Sarmatae, although indeed the Peucini called by some Bastarnae, are like Germans in their language, mode of life, and in the permanence of their settlements. They all live in filth and sloth, and by the intermarriages of the chiefs they are becoming in some degree debased into a resemblance to the Sarmatae. The Veneti have borrowed largely from the Sarmatian character; in their plundering expeditions they roam over the whole extent of forest and mountain between the Peucini and Fenni. They are however to be rather referred to the German race, for they have fixed habitations carry shields, and delight in strength and fleetness of foot, thus presenting a complete contrast to the Sarmatae, who live in waggons [sic] and on horseback. (Germania, 46, Gindin, 39)

Other scant references date from this period, including two by Pliny the Elder, who mentioned both the Anti (Antes) in his Natural History (VI, 35, qtd. Gimbutas, *ibid.*; Gindin 18-36) as a tribe living east of the Pontic steppes, and the Veneti, who lived along the Vistula. It should be noted that the term 'Veneti' (or any of its variants) was applied to various peoples inhabiting various regions at various times.

Areas in Brittany and Italy were both home to peoples to whom this name was applied. These references to the Veneti are significant due to the fact that the historian Jordanes (mid 6th century) identified the Venethi as Slavonic. Also, the Germans used the terms 'Wenden' or 'Winden' to refer to their West Slavonic neighbours. Of the remaining references to Veneti dating from this period, works of note include those by the Roman authors Cornelius Nepos, Pomponius Mela, and Julius Caesar (Schenker, Dawn of Slavic 3, 253).

Jordanes, in his work The Origins and Deeds of the Goths (De Origine Actibusque Getarum), was the first to mention the Slavs by name (Sclaveni). He wrote that

[...T]he populous race of the Venethi dwell, occupying a great expanse of land. Though their names are now dispersed amid various clans and places, yet they are chiefly called Sclaveni and Antes. The abode of the Sclaveni extends from the city of Noviodunum [...] to the Danaster, and northward as far as the Vistula [...] The Antes, who are the bravest of these peoples dwelling in the curve of the sea of Pontus, spread from the Danaster to the Danaper [...] (34-36)

He went on to write later in his chronicle that the Venethi occupied the area near the Baltic, east of the Elbe river, the Antes lived in the region between the Prut and Bug rivers, and the Sclaveni had infiltrated the lands north of the Danube: Moravia, Wallachia and Moldavia. Considered effective fighters by their enemies in the area, the Antes were thought to have filled the power vacuum left by the Huns in the late

fourth century CE. They were described as a sedentary culture, subsisting on agriculture and animal husbandry. As with their predecessors, the Antes were soon to disappear from the histories. They were last mentioned in 602 CE, and displaced by the Avars (ibid. 42).

Another chronicler to discuss the early Slavs was the historian Procopius of Caesarea (d. 562). Throughout this period, the Eastern Roman Empire was under considerable pressure from the barbarian tribes to the north, among whom were Slavs in great numbers. In his work De Bellis, Procopius devoted much attention to descriptions of the activities and ways of the Slavs, Avars, and other warlike tribes north of the Danube. Interestingly, Procopius did not regard the Antes as Slavonic, but a sub-grouping of the Alans, who were in turn a smaller division of the Sarmatians (Magocsi 38-40). As such, his testimony has been relied upon quite heavily by historians and linguists in reconstructing the early movements and culture of the Slavs. Because the 6th century chroniclers seem to have had access to more, and more reliable testimony regarding their Slavonic neighbours, scholars have placed a higher value on their writings than the scattered and often confusing references to the Veneti and Antes found in the earlier sources mentioned above. The following passage is taken from Schenker, and illustrates the amount of detail regarding the Slavs and their contemporaries that became available during this period.

For these nations, the Slaveni and Antae, are not ruled by one man, but they have lived from of old under a democracy, and consequently everything which involves their welfare, whether for good or ill, is

referred to the people. It is also true that in all other, practically speaking, these two barbarian peoples have had from ancient times the same institutions and customs [...] They live in pitiful hovels which they set up far apart from one another, but, as a general thing, every man is constantly changing his place of abode [...] and both the two peoples have also the same language, an utterly barbarous tongue. Nay further, they do not differ at all from one another in appearance...and they live a hard life, giving no heed to bodily comforts...they are continually and at all times covered with filth [...] (qtd. Schenker, 15-16; Gindin 170-250)

Although in other passages, Procopius, much like Tacitus' earlier description of the Germans, describes the Sclavini and Antae as something akin to the Enlightenment ideal of the 'Noble Savage', e.g. '[...] they are in no respect base or evildoers, but they preserve the Hunnic character in all its simplicity [...]' (ibid.), at other times he went into great detail regarding their cruelty. He described how, following a victory in battle, they would often impale survivors on tall stakes inserted from below, beat others about the head with sticks, while still others were drawn and quartered. Those survivors that were not taken into slavery were apparently herded into barns, which were then set alight (Barford 58).

The next major source describing the Slavs in detail was Strategikon, attributed to the East Roman emperor Maurice (r. 582-602). Because the Slavs (and Antes) were among the main threats to the Empire at this time, the author went into great

detail on methods of overcoming them in battle. Much of the information regarding the Slavonic culture seems to corroborate that found in previously-mentioned works. Echoing Procopius' assertion that the Slavs were guileless and simple, Strategikon described them as people who were 'kind and hospitable to travellers' and did not keep their slaves in perpetual bondage (120). Further on, he detailed their low levels of technological, social, and martial development for the benefit of those waging war against them. The following quotation is especially relevant to the topic at hand, as it touches on these aspects of Slavonic society.

The nations of the Slavs and the Antes live in the same way and have the same customs. They are both independent, absolutely refusing to be enslaved or governed, least of all in their own land. They are populous and hardy, bearing readily heat, cold, rain, nakedness and scarcity of provisions [...] They possess an abundance of all sorts of livestock and produce, which they store in heaps, especially common millet and Italian millet [...] They live among impenetrable forests, rivers, lakes and marshes, and have made the exits from their settlements branch out in many directions because of the dangers they might face. They bury their most valuable possessions in secret places, keeping nothing unnecessary in sight. They live like bandits and love to carry out attacks against their enemies in densely wooded, narrow, and steep places [...] Their experience in crossing rivers surpasses that of all other men, and they are extremely good at spending a lot of time in the water [...] Owing to their lack of government and their ill feeling toward one another, they are not acquainted with an order of battle [...] They are completely faithless and

have no regard for treaties, which they agree to more out of fear than by gifts [...] They are always at odds with each other, and nobody is willing to yield to another [...] Since there are many kings among them always at odds with one another, it is not difficult to win over some of them by persuasion or by gifts, especially those in areas closer to the border [...]

(Dennis 123)

The settlements of the Slavs and Antes lie in a row along the rivers very close to one another [cf. Procopius, above]. In fact, there is practically no space between them, and they are bordered by forests, swamps, beds of reeds. (ibid. 125)

Of the chronicles dealing with the Slavs, the above-cited are generally considered to be the most valuable in terms of the insight that they provide on the earliest contacts between the peoples of Central and Eastern Europe and the Mediterranean world. Other works often referred to in discussions of early Slavonic history include an episode retold by the emperor Heraclius' secretary Theophylact Simocatta and dated to 595, in which three Slav minstrels who requested imperial leave to reside in Thrace (Ivanov 10-64), The Paschal Chronicle (ibid. 75-82), which described a barbarian assault on Constantinople involving Slav forces in 622, Constantine Porphyrogenitus' De administrando imperio, which outlined the arrival of the Serbs and Croats into imperial territory as allies, and Fredegar's chronicle, a Merovingian document that contained an as-yet unverified account of the expulsion of the Avars from Central Europe by King Samo and an army of Bohemians and Moravians (Schenker, Dawn of Slavic 17-19). Noteworthy information in these

records includes the statement in Simocatta's account that the country of the Sclavenes was 'ignorant of iron' (ibid. 18), and the description of the Slavs ferrying troops to the siege of Constantinople in dugout canoes (Greek *monoxyla*) (ibid.). Other chronicles exist of later provenance, and are useful in establishing such information as various tribal divisions among the Slavs as well as their often less than amicable relations with their Germanic and Greek neighbours. However, because the above-mentioned documents offer the earliest accounts of the Slavs prior to their integration into medieval European society, they are most useful in helping to shed light on the ancient Slavonic peoples.

3.11 The Early Slavs: Archaeological Evidence

The ancestral Slavonic homeland is thought to correspond to the North Carpathian archaeological culture, which in turn corresponds to the homeland proposed by Lubor Niederle. This area includes south-eastern Poland, north-eastern Slovakia, Podolia, Bucovina, and northern Moldavia. Westward expansion at this time reached its farthest at the east bank of the Vistula, while the way south was blocked by steppe nomads (Gimbutas, Bronze Age Cultures 453).

Main characteristics of the material cultures identified by archaeologists as Early Slavonic are relatively poor workmanship, low levels of technology, a tendency to 'austerity', and a continuity with previous material cultures. The main types of physical evidence that scholars have relied on in reconstructing the early Slavonic

society and its subsequent expansion are pottery, graves, and settlements. Although a greater variety of styles of pottery began to emerge, the quality remained rather low, according to authorities in the field. The 'baggy and formless' (Barford 64) Korčak style of earthenware vessels, and the slightly later, 'generally nondescript' (ibid.) Prague style burial urns displayed little or no innovation in manufacturing techniques throughout this phase of Slavonic history. Metal artefacts are exceedingly rare until the second half of the 1st millennium CE.

Importantly, in addition to the temporal continuity displayed by the material cultures of Central and Eastern Europe, there was also a high degree of spatial continuity displayed between these areas and the territories further to the north, along the Baltic coast, indicating both similar levels of cultural development as well as commercial ties reaching to the Mediterranean. The evidence gathered from the Osztyn cemeteries in northern Poland (mid 6th-mid 7th centuries CE) confirms this; numerous metal artefacts as well as Byzantine *solidi* (gold coins) dating from the late 4th-early 6th centuries have been found in this area. However, between the 5th and 8th centuries, the artefacts from this archaeological horizon remained quite distinct from the Germanic cultures to the west (Barford 39).

During this period, another interesting phenomenon emerged. It was thought by most scholars that this period marked the beginning of the expansion of the Slavonic peoples, a process which, by the end of the 1st millennium CE had carried their culture and language west to the Elbe, south into the Balkans, and east into

Ukraine and Russia. However, if such a process was effected by a wave, or several waves of migration, as traditionally thought, there is no corroborating physical evidence of a depopulation of the Slavonic 'core'. Quite the opposite was the case; as the Slavs expanded, their homeland remained continuously inhabited at a similar level of population density, judging from the archaeological evidence. As it would have been entirely impossible, biologically speaking, for the native Slavonic population to reproduce at a sufficiently high rate between the 6th and 8th centuries to incorporate the surrounding territory, another explanation must be sought. Either there was a wave of migration, and it started much earlier than thought, or a process of accretion occurred, whereby adjacent groups were rapidly 'Slavicized' over the course of approximately two centuries (Barford 43, 46).

This process of accretion seems to have taken place in three phases. The first phase is thought to have occurred between 500-550, the second between 550-600, and the third 600-700. Phase I was attended by a lateral expansion of the North Carpathian material culture. The initial range of this culture reached to the south through Moldavia and eastern Romania towards the Danube plain and the Balkan peninsula, to the north-west along the Carpathian mountains into southern Poland, along the south side of the Carpathians towards western Slovakia and Moravia, and then on to Bohemia and Polabia, and eastwards into Ukraine.

This culture was typified by the Korchak pottery style, the tendency to cremate the deceased and bury the remains in urns, and a specific type of dwelling. The

pottery was, as a general rule, unremarkable, having been handmade and undecorated or minimally decorated. Although inhumation is attested by excavated evidence, it is unclear if it was the normal practice; at this time only six burial sites for the one hundred known settlements have been discovered. The dwellings typical of this culture were small and square with sunken floors. In the northern Carpathian region, these dwellings tended to contain distinctive free-standing clay ovens, while on the periphery of the expansion, e.g. in territory now part of Ukraine, they often contained stone ovens that were integrated into the structure itself (Barford 39, 47-48).

As mentioned in the discussion of primary sources above, the transdanubian zone was the first point of contact with the Byzantine culture, as well as the Turkic steppe cultures which had been making inroads into Europe for several centuries. Until this point, the expansion of the Slavonic culture seems to have been relatively peaceful in nature. Eastern Roman/Byzantine sources had not yet mentioned the Slavs by name in their prolific accounts of the increasing number of barbarian raids, and there are no known Slavonic sites of fortification that date from this time. The borders of the Eastern Roman Empire, whether contiguous with geographical features, such as the Danube or the Carpathian mountains, or simply lines on a map, often provided important points of contact from a cultural, political, economic, and linguistic point of view. Naturally, these borders were by no means stable boundaries, keeping the Greek-speaking *romaioi* in and the uncivilized barbarians out, but should rather be seen in terms of perceived lines of authority: the boundaries of civilization. One author cited a contemporary Greek term describing the area around the lower Danube: *mixobarbaroi*. This term translates as 'semibarbarians', and was

[...] used by the Byzantine authors of the time to describe individuals or communities in this area whose origins or behavior showed that they were imperfectly assimilated into civilized society; and it is significant that this term applied equally to Byzantine citizens who were forgetting their civilized habits [...] and to foreigners who had gone some way towards absorbing Greek civilization. (Obolensky, Byzantium and the Slavs 311).

Numerous invasions occurred, some successful, some not, and the borders of the empire, not to mention those of the transitory khanates and principalities of north-eastern and central Europe and Asia were frequently in a state of flux. Nevertheless, influence crossed the borders in both directions. The Greek city-states, and later the Byzantine Empire from earliest times depended on the raw materials extracted from the steppes, forests, and rivers of Eastern Europe, and also found them to be profitable markets for manufactured goods such as wine, jewellery, and other commodities.

A second example can be found in the influence that the steppe nomads exerted on the military tactics and organization of the Byzantines. It was common practice until relatively late for the Byzantine cavalry to ride bareback. It is interesting to wonder how many times the imperial troops encountered the superior cavalry methods of the barbarians, e.g. the use of saddles with stirrups, the technique of shooting backwards off of a galloping horse, or other skirmishing tactics, before the first battalions of mounted Byzantine archers were formed and deployed. Such battalions came to form integral units of the imperial force. A final example of the interaction between the Empire and its neighbours is provided by the thousands of

Roman and Byzantine coins excavated in locations throughout central and Eastern Europe. Trade has been carried out in these regions for millennia, and did not stop or start with the ascendancy of the Empire. Indeed, the tributes that various emperors were compelled to pay the khans and warlords of the steppes helped to develop monetary economies in these areas (ibid. 306-7).

As the Slavs began to interact with the various cultures that were concentrated along the Danube frontier, they became more aggressive. By the 6th century, the Sclavini and Antae had come under the influence of the Turkic Avars, and begun to conduct raids across the border. Often, such aggression was instigated by various other parties, whether the Avars, or other groups, such as the offensive prompted in 550 by the Ostrogoth leader Totila. Such raids prompted the refortification of the Danube frontier and the near-complete cessation of trade across the *limes*.

The Avars originated in Central Asia, and began to move into Eastern Europe in the first half of the first millennium CE, and soon proved themselves to be one of the major threats to both the Byzantine Empire and the Frankish realms. They seem to have passed through the steppe corridor relatively quickly, and settled north of the Danube, in Pannonia. Despite the best imperial efforts to 'divide and rule' them, the Avars began raiding into the northern provinces of the Empire shortly after the death of the Emperor Justinian in 561 CE. In addition to earlier entanglements in the West (their involvement as allies of the Lombards during the Gepid war), the Avars, led by Khan Bayan, besieged Sirmium until 574, when Justinian agreed to pay them tribute.

Between 578 and 582, the Avars, perhaps with Slav levies raided into Thrace, Illyricum, and Greece. In 582, Bayan successfully besieged Sirmium a second time. By 600, the imperial forces had forced the northern frontier back to the Danube.

Unfortunately for the Byzantines, during the reign of Phocas, the frontier was completely overrun, and the Balkan peninsula occupied permanently by Avars and Slavs. Twenty-six years later, an Avar horde besieged the Imperial City itself, but was repelled, and withdrew to Pannonia. A celebrated Merovingian chronicle, attributed to Fredegar, tells of the Moravian king Samo, who with a force of Bohemians and Slovaks, ousted the Avars. They were also repelled by the ancestors of the Serbs and Croats, who came to the area from the region north of the Carpathians. The fortunes of the Avars continued to decline on their eastern marches as well, where the Onogurs, a Turkic tribe, forced them out of the area between the Sea of Azov and the Caucasus. The Avar threat was finally neutralized by Charlemagne in 803 (Obolensky, Byzantium and the Slavs 27-33).

Sources are unclear about the exact nature of the Avar presence in the Slav lands. While Obolensky implied that the Avar sphere of influence extended from the Volga in the east to Pannonia in the West, Magocsi stated that by the mid-seventh century the Avars had already removed from what is now north-central Ukraine, or the southern reaches of the Slav homeland (42). In addition, Obolensky wrote extensively of the Slav elements in the Avar hordes, while Magocsi made only passing references.

The second wave of expansion (550-600) saw the Slavonic peoples achieve their maximum geographic expansion of the early period of their history. Several phenomena make this period distinctive. First, it marks the initial expeditions of the Slavs out of their ancestral forested steppe homelands and into the forests proper of Central and Eastern Europe. On the southern frontiers of Slavonic expansion, this period was marked by increased penetration into Byzantine territory. Often this was directly related to the activities of the Avars. Although the Byzantines often tried to play their adversaries off against each other, as in the 560's, when the imperial authorities paid the Avars large amounts of gold to subdue their Slavonic neighbours (the written records are corroborated by the discoveries of several large hoards of gold coins in the middle Danube and Carpathian basins), in general the evidence indicates the development of a 'symbiotic' relationship between the two peoples. By the late 6th-early 7th centuries, assemblages of artefacts of mixed Slavonic-Avar origin begin to appear (Barford 56).

Throughout this period, the Slavs undertook a process of settlement in the Balkans. The widespread economic and political instability developing in this region facilitated the infiltration of groups of Slavs. An example of a province where there was a high degree of ethnic and linguistic flux, accompanied by political and economic instability, was Dalmatia. This area was already home to a complex array of ethnic groups and languages when the Slavs began to infiltrate the area via the Sava and Drava river valleys in the mid 6th century. They joined a volatile mix of Turkic and Germanic peoples, who in turn were competing for resources with the established

Greek population as well as the descendants of the Latin-speaking communities of the area.

In the northern and western reaches of Central Europe, as has previously been noted, the Balto-Slavonic and Germanic cultural regions remained quite distinct. During this time, it is argued that the Germanic presence in northern Polabia (the region of modern-day Brandenburg and Cottbus) receded, and the area was settled by Slavs. This would appear to have been an instance of actual abandonment of the territory by its indigenous Germanic inhabitants, as there was little characteristic melding of the material cultures, rather one was replaced by the other (ibid. 65).

The final phase of early Slavonic cultural expansion is dated to approximately 600-700 CE. Judging by the evidence, this was a period that commenced in relative political stability, and was characterized by innovations in the sphere of material culture. Barford remarked that

The seventh century marks the beginning of a slow but eclectic acceptance of foreign cultural models, especially from the world of Byzantium and Longobard Italy, as well as from and through the medium of the nomads (Avars). (67)

This period saw sweeping changes in the organization and politics of the East Roman Empire as well, some of which were the direct result of the increased aggression on the part of the Slavs and their allies. In the year 602 the emperor Heraclius ascended the East Roman throne and instituted a series of drastic changes,

which are considered to mark the beginning of the Byzantine Empire. Among the reforms of Heraclius that had a direct bearing on the history of the Slavs was the decision to withdraw all Byzantine troops from the outlying Balkan provinces in the 620's. Whether because of this, or as a result of this, the economy in these provinces completely collapsed and the majority of the Greek inhabitants removed to other areas. In the wake of the continuing Avar incursions and the Byzantine military withdrawal, the Slavs carried out a process of 'internal consolidation' (ibid. 70) throughout the northern half of the peninsula. They tended to avoid settling in pre-established urban areas or constructing their own strongholds, preferring instead to practice their traditional methods of agriculture in the hinterlands. It is thought that at this time the Slavonic population began to increase steadily, though precisely because they tended to settle in rural areas evidence for this has proven elusive (ibid. 89).

Throughout this time of widespread unrest and flux, the old trade routes between central and eastern Europe and the Balkans continued to operate. Through more intensive contact with both the Turkic Avars (and later Bulgars) and the Greeks, Balkan Slavonic material culture began to show technological and artistic advancement. Most notably, the widespread appearance of bronze and silver jewellery indicates that the 7th century saw an 'end to austerity' (ibid. 82). Ornaments such as spurs, belt fittings, bracelets, and the famous Slavonic fibulae (a type of brooch used to fasten clothing) have been found in numerous sites dating from this period. The cultural influence, as may be expected, tended to move from south to north. Generally speaking, the Slavonic peoples south of the Carpathians enjoyed a higher level of material culture at this time than their northern kin.

Other aspects of the Slavonic material culture showed signs of improvement as well. New types of pottery appeared during this period; a primitive type of potters' wheel (more accurately a simple turntable), which produced 'top-turned' pottery is evident from central and eastern European finds. The Slavs adopted the practice of burying the ashes of their dead in barrows.

Another important development was the appearance of the first fortified strongholds attributable to the Slavs. The strongholds of Volyn' and Kiev in Ukraine date from this period, and across the western regions of Slavonic territory, there appeared groups of strongholds. These forts were generally organized around some sort of defensible topographical feature, e.g. a hill, and were surrounded by ramparts constructed of either earth or timber and earth. Strangely, in some cases, the strongholds were not entirely surrounded by ramparts, which could be interpreted to indicate that they served more than just defensive functions. Barford was unclear as to what these other functions may have been, although perhaps they served as religious centres (86).

After the demise of the Avars, the next foreign power to have an impact on Eastern Europe was the Khazars. This Turkic tribe forged a 'powerful political and commercial centre' (ibid. 44) between the lower reaches of the Volga and Don rivers. Although covering a vast geographical expanse, sources speak of the Khazar khanate as a relatively peaceful, centralised political unit. Indeed, numerous tribes living outside the official borders of the khanate were *de facto* subjects of the khan, including, but not limited to, several Slav tribes, the Volga Bulgars, the Magyars, and

the Crimean Goths. From approximately 600-900 CE, the Khazar state provided a buffer against the invasion of Europe by tribes from the East.

From this point in history, the tripartite division of the Slavs, which is well-attested in the reconstructed linguistic evidence, began to appear among the physical evidence. With the increasing geographical range and the simultaneous growth in population of the Slavs, different regions began to be influenced by different cultures. The West Slavs rapidly came to be influenced by the powerful neighbouring Frankish state. They ultimately adopted the Latin rite of Christianity, and their cultural institutions and languages reflect this. The South Slavs, however, developed under the influence of Byzantium. Greek Orthodox Christianity, the Greek language, and the Byzantine political system all played a major role in shaping the society, politics, and language of the Slavonic peoples inhabiting the area south of the Danube. The arrival of the Turkic Bulgars increased the ethnic and linguistic diversity of this region. The East Slavs arguably retained their traditional habits and institutions longer than their western and southern cousins, though they too were altered through contact with external groups. This is especially evident in the case of the East Slavonic material culture, which displayed the results of prolonged contact with steppe cultures, e.g. the Khazars and Pechenegs, and indirectly the Islamic states of Central Asia.

3.12 Review of Traditional Assessments of IE Expansion and Consolidation

Since the work of the German archaeologist Gustaf Kossina and his contemporaries in the 19th century, the established method of archaeological interpretation was to correlate a specific material culture with a specific ethnic (and by extension linguistic) group. This method came to be known as *Siedlungsarchäologie*. Intertwined with this was the study of the evolution of society. It was traditionally held that the economic evolution of humankind went thus: hunter-gatherer, pastoralist-nomad, and finally, agricultural. Recent archaeological research has all but discredited this idea. Recall that the Secondary Products Revolution occurred *after* the introduction of agriculture into Eurasia, as a sort of specialization. This has been confirmed by the development of more accurate methods of dating artefacts, specifically, Carbon-14 dating. Thus, it has been determined that artefacts belonging to steppe cultures which used domesticated animals (especially the horse) for traction and/or riding and/or sustenance are of more recent provenance than sites and items contained therein from the earliest Eastern European agricultural sites. (Mallory, In Search of the Indo-Europeans 110-127; Renfrew, Archaeology and Language 120-144) Certain authorities have taken this argument one step further, arguing that a mobile pastoralist economy is not merely an adaptation of the agricultural lifeway to the harsher climate of the steppelands, but was to some extent or another dependent on a sedentary agricultural population for its sustenance. (Renfrew, Archaeology and Language 138, qtd. Krader, 1955, 1959; Barth, 1961; Khazanov, 1984, 52, 57, 63, 80.)

Due to her status as one of the leading modern proponents of the traditional, migrational model of PIE expansion, we focus on the work of Marija Gimbutas. To review, she expounded the view that the speakers of Proto-Indo-European were a 'more or less homogeneous proto-culture' (Gimbutas, The Slavs 17) that originated in the steppes of southern Russia during the mid to late fifth millennium BCE. As would befit such a homeland, the culture that Gimbutas identified as PIE was comprised of mobile pastoralists, whose culture she described, based on interpretation of the archaeological evidence, as patrilinear and patriarchal. The evidence indicates that these people were skilled in horsemanship; indeed, Gimbutas claimed that it was precisely their prowess at chariot-borne warfare that allowed them such a high degree of mobility and martial superiority. This mobility and superiority in turn was what, she claimed, facilitated their rapid and total conquest of Europe and much of Asia.

Gimbutas interpreted the archaeological evidence in such a way that the collapse of the Chalcolithic cultures of the Balkans and Anatolia was a direct result of the invasions of steppe nomads, whom she dubbed the Kurgan culture. This epithet derives from the tendency that these people displayed of burying their notables in barrows (Rus. *kurgan*, 'burial mound'). As opposed to the militaristic, patrifocal Kurgan culture, the aboriginal inhabitants of Chalcolithic south-eastern Europe were sedentary agriculturalists with a matrifocal society. She christened this culture 'Old Europe' (Gimbutas, Civilization of the Goddess 18-20), remarking that '[t]he gentle agriculturalists [...] were easy prey to the warlike Kurgan horsemen who swarmed down upon them.' (ibid. 352.)

Because this invading Kurgan culture was, in her assessment, the prototypical Proto-Indo-European culture, the homeland of the Kurgan culture in the steppes north of the Caucasus was the PIE *Urheimat*. The three waves of Kurgan intrusion into south-eastern and central Europe, dated from approximately the middle of the 5th millennium BCE were facilitated by the use of horse-drawn chariots. The foothold gained by the Kurgan people at this time allowed them to continue their conquest of Europe, thereby spreading their PIE language and culture throughout the remainder of Europe, in addition to Anatolia, the Near East, Central Asia, and northern India. As she remarked in her opus The Civilization of the Goddess,

Even if we admit the presence of Anatolian influence on southeast Europe during the 7th millennium B.C., we cannot see it as a transplantation like a tree at a certain time [...] Furthermore, we cannot equate this matristic and art-loving civilization with a proto-Indo-European culture [...] which is reconstructed [...] as a patriarchal, patrilineal, warlike, mobile (horse-riding) culture, and having a pantheon of dominant male gods. (9)

After the initial Kurgan intrusion, a process of hybridization took place, whereby the previously mobile and aggressive steppe nomads began to sedentize and take on characteristics of their subjects, producing an amalgam of the cultural institutions, population, and language(s) of the Old Europeans and the Indo-Europeans, in which the dominant cultural and linguistic elements were IE.

The process of sedentization presumably continued, as the inheritors of the Kurgan culture adopted the agricultural lifeway where the ecology was suitable. The

political and demographic situation remained unstable on the steppes, though, and various waves of invading tribes entered south-eastern Europe throughout the Bronze and Iron Ages (the Cimmerians and the Scythians). Indeed, the often volatile dynamics between the European farming cultures and the pastoralist nomads was a *leitmotiv* of cultural interaction well into the Middle Ages; numerous intrusions brought first Indo-European nomads, and later Finno-Ugric, e.g. the Magyars, and Turkic peoples, e.g. the Huns, Avars, Khazars, etc. into the orbit of the agriculturalist civilizations of Europe.

Of signal importance for the discussion of Slavonic origins is the North Carpathian culture of the Late Bronze and Early Iron Ages. Gimbutas and her colleagues consider this group of people to have been the direct ancestors of the Slavs. Interestingly, the process of sedentization seems to have produced a rather complacent culture in this area. As Gimbutas herself remarked, '[a]lmost all forms of bronze weapons, tools, and ornaments are either imports or imitations of types from the south.' (Bronze Age Cultures 453) Later, she continued '[w]ith the beginning of the Iron Age the Cimmerian and Scythian movements ended the relatively quiet life of the North Carpathian people during the Bronze Age'. (ibid. 473) Despite the flux introduced by the steppe nomads, it was during this period that the Slavs presumably began their 'colonization' of large tracts of Eastern Europe, appearing for the first time by name in such chronicles as Procopius of Caesarea's De bellis, Jordanes' History and Deeds of the Goths, and Maurice's Strategikon.

With the increased frequency of invasions from the steppes, the primordial Slavonic linguistic unity began to disintegrate. By the second half of the 1st millennium CE, the traditional tripartite division into West, East, and South Slavonic cultures is considered to have begun; within these larger cultural divisions, the Slavs had also begun to branch into tribes with distinctive identities and names: the Slověne, Antes, Serboi, Xoroathos, Venethi, and numerous others (Gimbutas, The Slavs).

Gimbutas' and her colleagues' model of prehistoric archaeology and population movement was based almost entirely on physical evidence such as graves, settlements, etc. When, in a certain geographical area, a site was found containing different types of artefacts, this was seen to indicate the arrival of a new group. Often these finds were not isolated, but spread over a large area. Sites that contained the same, or similar types of artefacts were grouped together under the heading of a 'culture', for example the Xvalynsk Culture, the Yamnaya Culture, the Černiaviv Culture, etc. These cultures, spread over larger areas and exhibiting identical or similar artefacts, were thought to represent homogeneous ethnic groups, thus bringing into a given area their new styles of pottery, iron smelting, etc., as well as intrusive ethnic and/or cultural influences.

Once these physical remains were dated, a chronology could be established, and archaeologists felt confident in making claims regarding the demographic shifts taking place in a given area at a given time, whether across an entire continent, or

restricted to a smaller region. Simultaneously, linguists were working with theories of language reconstruction, most notably the comparative-historical method. What this entailed was a cataloguing of all known evidence pertaining to the Indo-European languages, and comparing them to each other in order to establish systems of regular sound change, which could then be extrapolated in order to generate reconstructed forms. For example, when the known Slavonic languages were compared with each other, certain regular sound shifts become apparent, and a reconstructed proto-lexicon was posited. Taking this one level further, when the proto lexica of the various branches of the IE languages were compared, and the Comparative-Historical Method was applied, the original PIE lexicon emerged. The findings were then compared to early literary monuments, ancient toponyms, and/or confirmed lexical borrowings into and out of the languages that were in contact with each other. As more evidence was discovered and more lost languages were unearthed or deciphered, e.g. Hittite or Tocharian, gaps in the theories were filled up, yielding a workable foundation for further research.

The dynamic between the two disciplines was highly circular. On the one hand, as chronologies for language change were compared with established history, archaeological evidence was brought in by linguists to substantiate their claims that PIE was spoken in a given place at a given time. Or, if material evidence existed indicating, according to the theory, the arrival of a new culture in some area that could be accurately dated, and this fit with the relative chronology for a given linguistic change, then this must indicate that some group of PIE-speakers separated from the main group, established itself in the area in question, and their language began to evolve along distinct lines from its neighbours. Simultaneously, archaeologists,

armed with reconstructed lexical data, felt confident in correlating a newly discovered style of ceramic with the timeline proposed by the philologists (originally based on archaeological evidence) with the arrival of a new ethnic element. If taken at face value, the entire system is very neat and self-fulfilling. Simultaneously, questions arose regarding the ancestral homeland of the PIE speakers. If there was a language, presumably there was a group of people to whom it was native, therefore they must have originated in some specific locale.

Others noted onomastic gaps in the proto-lexicon, and then correlated this to various geographical boundaries of those species, and then when all the lines on the map were drawn, the common area was the homeland. The theories and methods were as numerous and varied as those who produced them. Thus, arrows were drawn all over maps to account for the movements of various tribes out of whatever region a given author thought most likely for the homeland.

Archaeology would seem to support this view, with ample evidence of material cultures generating theories of waves of migration, whereby different types and styles of artefacts indicate the presence of different ethnic groups, who presumably spoke different languages. The sites excavated containing one type of artefact previously unknown in the area would seem to support the correlation with arrival of a new group of people, and by extension, a new language. Hand in hand with this method, linguists have posited a chronology of the divergence of the Slavonic tongues, first into three large groups (East, West, and South), and then into

smaller subdivisions based both on internal reconstructions and comparison to adjacent languages of different sub-families (Indo-Iranian, Baltic, and Germanic), and using the archaeological evidence to validate their views. Because of the relatively late introduction of literacy into Slavdom, it has often been difficult to establish the workings of the prehistoric reconstructed parent language; the end result and some of the later processes are visible for all to see, the general trends of the languages before attestation are reliable enough, but nevertheless the slightest change has generated storms of controversy within the field. Add to this volatile mixture clashing political agenda, and it is no mean feat that even minor consensus has been reached in the field of Slavonic philology.

So it would seem that many of the relevant issues have been addressed. The timeline has been established, the evidence collected and sorted, and the details of internal reconstruction, with little exception, decided upon. Any further research into the topic of Proto- or Common Slavonic would really only be needed to pin down some of the more troublesome details. When viewed from another angle, some, if not much of the evidence becomes suspect.

3.13 The Demic Diffusion Model

To begin with, to definitively equate material culture with ethnicity with language is absurd. Naturally, this is sometimes the case, depending on what a given

person happens to be interred with. P. M. Barford explained this, when he discussed the contents of Avar graves.

Thus the Avar elite wore a specific type of clothing [...This] was probably a status symbol, but it does not mean that each grave in which these fittings were found belonged to an Avar horseman who had come from Mongolia (the skeletons they are found with are rarely of mongoloid type) [...] (34)

Evidence has already been provided of trade networks lacing Eastern Europe since the most ancient times. While a given pottery style does not necessarily indicate the invasion of a more technologically advanced group, the discovery of a new type of implement, religious motif, or style of decoration does indicate an innovation. The point is that ideas, techniques, and items filtered through the area, not as quickly as in later times, but steadily nevertheless. Information was exchanged along such trade routes, in addition to actual goods themselves. Given the time period in question, numerous items would have been produced locally, but again, in Eastern Europe at least, even basic materials such as flint, and later tin and iron were imported into the region.

Colin Renfrew, in his 1987 work Archaeology and Language. The Puzzle of Indo-European Origins, with subsequent modifications (1990, 1999, 2000, 2001), pointed out that the traditional models of PIE expansion failed on both logical and empirical grounds. This work was among the first serious challenges to the traditional

Siedlungsarchäologie method, and as such has proven to be quite controversial. Because Renfrew's model is fundamental to our understanding of the Indo-Europeanization of Europe a detailed survey is provided of Renfrew's model in this section. Although many readers may already be familiar with the idea of Demic Diffusion, this is, to our knowledge, the first instance of the application of it in order to substantiate claims regarding the evolution of a later branch of the IE language family. Therefore, we feel a detailed survey of this model is necessary before we can continue with its application to account for the history of Slavonic.

Regarding the homeland, he advanced a theory that the Indo-European homeland was in central Anatolia. Perhaps even more surprising was that he argued that the PIE expansion was not a wave of advance of steppe nomads during the Bronze Age, but a gradual diffusion of prehistoric farmers that occurred beginning in the late Neolithic. This hypothesis relied less on the introduction of new archaeological or linguistic evidence, and more on an innovative interpretation of existing data.. Much of Renfrew's argument rests on processual models of population movement developed by the group of scholars known as the 'New Archaeologists'.

It was argued that while we cannot expect to find direct evidence in the archaeological record for a specific prehistoric language or language group, we can indeed study processes of demographic and social change. It is these processes of change which we may seek, however hypothetically, to correlate with language change in those areas.

(Archaeology and Language 264)

Renfrew cited six processual models, which were operative during various phases of IE history, and can account for cultural and/or linguistic replacement: Demography/Subsistence, Elite Dominance, System Collapse, Constrained Population Displacement, Sedentary/Mobile Boundary Shift, and Donor/Recipient Population Systems. The first model describes a situation in which a language enters a given territory with a large incoming population. This is not generally a military conquest, but a situation where superior technology facilitates occupation. Renfrew commented that '[b]y far the most obvious instance of this process is the introduction of farming into an area previously inhabited only by hunter-gatherers.' (ibid. 125) Subsequently, he noted that

This [...] is a powerful factor which outweighs almost all others when we are discussing the large-scale dispersion of a new population. Of course, it should at once be stressed that the spread of a new technology certainly need not imply the spread of a new population: the diffusion of an innovation is a familiar process, and the existing population is generally perfectly capable of taking up new techniques and applying them. (ibid.)

Using this model, Renfrew concluded that the IE expansion stage must then have occurred far earlier than conventional theory held. In essence the argument is that the IE languages had reached Eastern Europe with farming, as the result of the massive population increase that agriculture allowed. More food could be produced by fewer people, leading to specialization among the remainder of the population, which in turn yielded social structures with which we are familiar today. According

to Christian, a hunter-gatherer economy could support approximately one person per ten square kilometres, whereas using even the most primitive forms of agriculture were capable of supporting a population of up to fifty people per ten square kilometres (69). Because even the most primitive agricultural techniques can support a far greater population than the most sophisticated hunting and gathering economies, the rapidly increasing Proto-Indo-European-speaking population gradually expanded out of its original territory, carrying its language along with its new food production techniques.

The second processual model discussed by Renfrew was *Élite Dominance*. This model represents in many ways the opposite of the *Demography/Subsistence* scenario; it takes place when a relatively small group of well-organized, highly-motivated, and generally better armed people import a new language into an area. Such a scenario would have resulted in a high degree of bilingualism, both on the part of the aboriginal population as well as that of the invading elements. Ultimately, it seems that in Eastern Europe, the majority of *Élite Dominance* scenarios ended with the total or near-total assimilation of the invaders into the indigenous population. There are numerous examples of this kind of situation from the history of Eastern Europe. The Kurgan migrations of the Late Bronze Age, the Cimmerians, Scythians, and the various Turkic tribes. In addition, the Varangian colonization of East Slavonic territories exemplifies this model.

The third model discussed by Renfrew was that of System Collapse, and refers to the tendency of many pre-modern states to grow beyond their means relatively quickly. This in turn led to a collapse of central authority, which could then result in localized movements of people from the outlying areas of the 'state' towards the centre. The instances of this sort of scenario in ancient Eastern Europe were quite probably rather limited in number; due to the high degree of political instability produced by successive invasions of steppe pastoralists, the formation of states (or even supra-tribal alliances of any durability) were somewhat rare. Nevertheless, prime examples of this process at work arguably include the disintegration of Xazaria, and later of the Byzantine Empire and of Kievan Rus'. While in each of these instances, the death knell of the state was struck by invaders whose origins can be traced directly or indirectly back to the steppes of Central Asia, it is important to note that some degree of decay had set in, due to a variety of unique factors in each circumstance. In the case of Xazaria, the precarious geographical position that this realm was situated in, between the established civilisations of the Mediterranean to the west and the Islamic dominions to the south and the highly mobile, aggressive steppe nomads to the east, as well as the emergent East Slav cultures to the immediate west, ensured that political flux would always be a major source of pressure on the Xazar qaganate. This political pressure was one of the main contributors to the collapse of this particular state.

Much the same may be said of the Byzantine Empire; internal pressure, constant feuding with the developing kingdoms of western Europe, the Persians and later the Turks to the east contributed to the ultimate undoing of the Eastern Roman

Empire. Central Asian tribes, often backed by forces drawn from the increasingly aggressive Slavonic tribes from north of the Danube aggravated the situation. In addition, internal cultural factors did not ameliorate the situation, e.g. frequent violent clashes over the Imperial throne deprived the Empire of a strong central organisational authority when it would have been most helpful. Other more subtle factors were also at work, for example the declining number of adult males available for military service due to an increased tendency to take monastic vows ensured that Byzantine armies relied more and more on foreign troops, whose interests did not always coincide with the Imperial authority's. In addition to an increasing reliance on foreign manpower, the Byzantine Empire also relied on foreign trade to sustain its population; vast amounts of wealth were paid out to whoever happened to be in control of the farmlands of the Pontic steppes at any give time to ensure that the citizens of the Empire did not fall prey to famine. In the end, all of the above factors conspired to reduce the Empire to such a weakened state that it fell easily to the armies of Sultan Mehmet II in 1453.

The final example of System Collapse, the fate of Kievan Rus', bears certain similarities to the both Xazaria and the Byzantine Empire. This state was definitively annihilated by the Mongol invasions of the 13th and 14th centuries. In this particular case, though, certain institutions and practices endemic to the political culture of Rus' ensured that not only was it difficult for any one ruler to maintain effective hegemony over the disparate principalities that composed the Kievan state, but also that when an external crisis loomed, they were not up to the challenge of repelling it. We refer here specifically to the system of succession of the princes of Rus'. When a new prince ascended the throne of Kiev, it was common practice for him to redistribute the

remaining principalities to relatives and supporters. Naturally, this led to feuding and infighting more often than not. While it is, at this point, mere speculation, it is interesting to note that this system bears close resemblance to the practice of Blood Tanistry (see next paragraph). This similarity is an example of the high degree of influence that the various Central Asian cultures exerted over the Slavonic farmers, whom they dominated for much of their history. Regardless, the collapse of the Kievan state due to both its inherent instability and external pressures resulted in significant migration to the north.

There are several notable examples of Turkic calques in ESl., adopted between the period of initial Slavonic-Altaic contact and the Tatar invasion (in addition to calques from later periods which do not directly concern this work). Significant examples include the ethnonyms *polovčiny* ('Quman'), calqued on the basis of OESl *polovj* ('pale'), and *černii klobouci* '(people of the) black hats' ('Qipchaq') (Golden 106). The epithet of Prince Jurij Volodislavič, *Deržikraj*, is a further example of a Turkic calque, in this case based on the Cuman epithet *Eltoutū* (ibid, 107). Two final examples include the semantic extension of the *jazyk* 'tongue', to include the meaning 'informer, spy', on the basis of the Turkic use of *tıl/tıl/dıl* 'tongue' in the same manner, and the phrase *bosyj volk* from Cuman 'gray wolf of the steppes' (ibid., 107-108.) Perhaps the most telling example of the impact that Turkic tribes had on their ESl neighbours is the adoption of certain political institutions (and their accompanying terminology) by the East Slavs. In his article 'The Question of the Rus' Qaġanate' (2003), Peter Golden examined the instances of the usage of the term *qaġan* to describe leaders of the East Slavs; Christian also devoted attention to the

emergence of this institution during the period of the *pax khazarica* (see §3.11). Native ESl usages of the term include three references to *kaganъ našъ Vladimirъ* and two to *kaganъ našъ Georgii* (Jaroslav) in *Slovo o zankoně i blagodati*. Muslim sources make frequent use of the term when describing the leaders of Rus'. Ibn Rûsta mentioned *Xâqân Rûs* (ca. 903-913), and Hudûd al-‘Âlam wrote in 982 that ‘their kng is called Rûs Khâqân’ (ibid., 81-82).⁷ The use of this term is especially intriguing (and quite ancient, dating back to the Hsiung-nu (184-187, 233) as it is not merely a generic title indicating authority, but one with specific requirements attached to it (cf. Gk *basileus*). For one thing, it required a formal relationship to the supreme Turkic *qaġan*, which in the case of Rus’ was probably due to a matrimonial alliance, rendering the leader of the Rus’ a vassal *qaġan*. In addition, many concomitant customs were borrowed along with the title. For example, the Rus’ *qaġan* was reported to have a bodyguard of four hundred soldiers, his feet were not permitted to touch the ground (indicating divine or semi-divine ancestry), his horse was brought directly to his throne, and he employed a *xalîfa* (deputy), who commanded the army and represented him in front of the populace (ibid., 83-87). Another cultural borrowing seems to have been the practise of Blood Tanistry, common among steppe cultures since ancient times. Christian described this practice as

[...’T]he principle of succession that the most talented male member of the royal clan should inherit the throne, commonly by murder and war.’
Such leaders preside over large tribal or supra-tribal armies of pastoralists.
However, these large groups are inherently unstable. (90)

⁷ Ibn-Fadlân, writing in the 920’s, made no mention of a Rus’ *qaġan* (Golden 87).

Renfrew devoted less discussion to the final three Processual Models. The fourth of these, Constrained Population Displacement, he considered to be 'a rather secondary model' (Archaeology and Language, 141), despite the high currency it has traditionally been given in explaining the origins and developments of the Slavs and their PIE forebears. He went on to define it as the relocation of a large number of people, not through the means identified above under Demography/Subsistence, but as a direct result of the antagonistic activities of a second group, i.e. a military invasion. This is the classic model invoked to account for the movement of languages by such scholars as Gimbutas and her contemporaries. If care is required in using this model where other, more valid explanations may be available, then one must also be open to the fact that Constrained Population displacement was, nonetheless, rather commonplace, if on a restricted scale. Numerous examples exist from prehistoric times into the Middle Ages. One of the results of the System Collapse of Kievan Rus' was a period of migration. Also, intrusions of steppe nomads in the Early Medieval period may have caused the displacement of the Slavonic population of the forested steppe zones. Renfrew himself conceded that the period of ethnic and political flux following the decline of the Western Roman Empire, traditionally known as the Great Migrations, probably resulted in Constrained Population Displacement (ibid. 141-142).

The fifth model for language relocation discussed in Renfrew's work was the Sedentary/Mobile Boundary Shift. As implied in the name, this term refers to the movement in the boundary between an agricultural population and a pastoralist one, with a concomitant shift in language and/or culture. This is a rather more subtle

process than the previous one, and evidence of it can be easily overlooked. The interaction between the early south-eastern European farming communities and their pastoralist neighbours after the Secondary Products Revolution showed signs of this scenario, as material remains would seem to indicate (ibid. 142-143).

The final Processual Model Renfrew discussed was Donor/Recipient Population Systems. This scenario probably occurred during the Neolithic-Early Bronze Age period, as agriculture was being introduced into Europe. Essentially, this term describes a situation where there are two adjacent populations, one of which is more dynamic, i.e. increasing in numbers more rapidly than its neighbour. In this sort of case,

[...] the more rapidly growing group becomes, often over a long period, the donor group in terms of population, and the other the recipient. The result is the steady intrusion of an immigrant population into the less dynamic zone. (ibid. 143)

In this instance, Renfrew would seem to have been describing the demographic process that results in linguistic substrata.

It is important to note that all six Processual Models described above can be considered Punctuation Events in Dixon's schema. As a result of any of these, languages are brought into contact with each other, which then often results in contact-induced change. It is during the intervening periods of equilibrium that these

changes are 'smoothed over', and language-internal processes take over, allowing the initial disruptions to the system to be consolidated and regularized.

Indigenous peoples in the 'new' areas, which the Indo-Europeans 'annexed', were either assimilated, or retreated into isolated enclaves, and gradually faded out of existence.⁸ The ramifications of accepting this theory are quite profound, both because such an acceptance requires allowing a much greater time depth for the development of Proto-Indo-European (ten thousand years as opposed to the previously-held five thousand years), but also because acceptance of this theory entails a comprehensive revision of the accepted interpretation of archaeological evidence pertaining not only to the Indo-Europeans, but archaeology in general. As Diakonov noted,

Language territory cannot in principle be unreservedly identified with the territory of one certain archaeological culture. Especially in the archaic periods, with little communication between tribes, different archaeological cultures can form within one dialect continuum. Such cultures would not perhaps be quite dissimilar. Language being the most important medium for the transfer of cultural features, it stands to reason that inside one major archaeological culture we should expect one language or at least one dialect continuum. (57)

⁸Such groups as the Basques are thought to be the modern remnants of indigenous, Pre-Proto-Indo-European populations. Genetically and linguistically they are entirely unique, according to Cavalli-Sforza, although some scholars, e.g. Colarusso, argue for ancient phyletic links between Basque and other language groups, e.g. Northwest Caucasian.

3.14 The Pre-Proto-Indo-Europeans, Proto-Indo-Europeans, and Slavs

The question of the fragmentation of Common Slavonic has a particularly interesting aspect to it: that of chronology. Were the speakers of the ancient Slavonic dialects where we think they were during the prehistoric and Classical periods? Did they take as long to diverge as thought? Did they take longer? Precisely what evidence do we base our theories on? These questions are approached from two angles: first, the place of Proto- and Common Slavonic within the larger family of Indo-European languages, and secondly, the primary sources, which modern scholars have access to, and how these are used.

It has been proposed that the earliest agriculturalists in Eastern Europe the ancestors of the Slavs. Images of compact, heterogeneous ethnic groups are best avoided. As noted above, the population of the area was no doubt highly varied, with nomads crossing the steppes to the south in later centuries, more 'primitive' Finno-Ugric-speaking tribes to the north, co-territorial with, yet often discreet from their farming neighbours. Due to the relative inclemency of the environment of the northern forests, agriculture took quite some time to penetrate this area. Even then communities tended to remain isolated.

Bearing this information in mind, we now attempt to build upon these findings using an alternative analysis of the evidence than that traditionally held. The region

consists of two very different spheres: the stable, culturally conservative north, and the more dynamic south with its tumultuous history of successive invasions. The picture that emerges regarding the Slavs is one of a contrast between sedentary agriculturalists and their more mobile neighbours.

It must be noted that Renfrew's work has come under much fire, mostly due to certain inconsistencies with established archaeological and historical linguistic views. For example, the Dutch Indo-Europeanist R. S. P. Beekes was quite critical of Renfrew's ideas. In the first place, he claimed that '[...]his theory in fact is not based on any evidence, except that Renfrew can find no archaeological support for large-scale migrations after this period [i.e. 6500 BCE].' (1995, 49) Furthermore, he argued that

By such a slow movement of settlement as Renfrew proposes we would expect that the various languages and dialects of the Indo-European peoples would have many loan-words, but this is not the case. A gradual split would suggest that there would be common developments among the different branches of the original language, so that, for example Germanic and Celtic, which was the last to split off, would have shared a long period of common development; but this was not the case, either. Renfrew's theory does not only conflict with what we think we know about the Indo-Europeans, but also with the whole picture we have built up about them. Quite apart from this, there is no positive evidence whatever that agriculture was introduced into Europe by the Indo-Europeans. (49)

Similarly, in the view of J. P. Mallory, Renfrew was correct in identifying Anatolia as the region from which farming was introduced into Europe via the Balkan peninsula, but incorrect in identifying the first European farmers as speakers of Proto-Indo-European (1989, 177). Furthermore, he found the amount of linguistic diversity present in late Neolithic and Early Bronze Age Anatolia to render unlikely the claim that this was the PIE *Urheimat*. The third criticism he levelled at Renfrew's theory was the incompatibility of the claim that agriculture was vehicle of PIE spread with the established archaeological timeline for the introduction of farming into various parts of Europe and Central Asia.⁹ The thrust of his criticism is summed up in the following passages:

[...T]here is a case to be made for non-Indo-European substrates across all Anatolia and on into Greece, and I would have thought it far more plausible to associate these with the spread of the Neolithic economy from this region rather than what are almost universally taken to be intrusive Indo-Europeans.' (ibid. 179)

I am puzzled by a solution that propels Indo-Europeans out of their Anatolian homeland such that they traverse over 3,000 kilometres to arrive in Ireland in the course of two millennia, yet require 5,000 years to advance the 100 or 200 kilometres (if that much) east to Armenia [...W]as this a reoccupation of the Indo-Europeans' former territory [i.e. Armenia], or the furthest eastern expansion of Indo-Europeans from their Anatolian home? (ibid. 178)

⁹ In addition to Gimbutas, Mallory and Beekes, see also Kallio, Dergačev and Olmstead for similar critiques of Renfrew.

The work of both Beekes and Mallory must be recognized for what they are; in the former case, a superb textbook of Comparative-Historical Linguistics and exposition of PIE grammar, and in the latter, an outstanding survey of Eurasian archaeology. However, aspects of both scholars' historical linguistic arguments fail for similar reasons. To begin with Beekes, his work is somewhat achronological, in that he treated only the PIE phase of the evolution of the IE languages, with no reference whatsoever to earlier, i.e. PPIE, phases. Implicit in his criticism of the Demic Diffusion model of PIE expansion, were two things: that PIE *only* spread via agriculture, and neither 'ahead' of it nor 'behind' it, and that PIE only began to fragment *after* it achieved its maximal geographic expansion.

When considering both demographic and linguistic expansion trends and processes, allowance must be made for numerous unique localized factors, which would have influenced the rate of increase of any intrusive populations, whether the language of the non-native population was adopted by the indigenous group or vice versa, and whether the indigenous group was assimilated genetically into the incoming population (or vice versa). Such factors, unique to each region, could include the climate and geography and the level of technological and cultural development of the groups in question. Regarding climate and geography, the dynamic between indigenous and foreign groups would have differed depending on such things as the availability of arable land, the length of the growing season, and the crops and livestock suited to a particular locale. In regions where the climate was harsher, or farming was generally more difficult (due perhaps to lack of water, short growing seasons, or a paucity of arable land), the incoming agriculturalists would

have taken longer to increase in numbers, allowing a longer period of co-territorial existence with indigenous hunter-gatherer populations. In terms of the degree of technological or social development, this would have had a direct bearing on the amount of prestige any foreign group was considered to possess. Indigenous communities closer to trade routes, for example, might be less prone to rapid cultural assimilation as farming communities encroached on their traditional hunting grounds, due to a greater familiarity with cultures other than their own. Prestige, as discussed in §2.13 and 2.14. In short, Beekes' criticism of Renfrew lacks the necessary amount of sophistication and familiarity with principles of linguistic and cultural evolution.¹⁰

Beyond the reasons discussed in the above paragraphs, the arguments of Beekes and Mallory (and scholars of similar opinions) fall short for one main reason: researchers adhering to the view that PIE speakers arrived in Europe and Central Asia only beginning in the fifth millennium BCE have yet to convincingly account for how the IE language and culture came to totally or near-totally dominate such a vast expanse of territory. Gimbutas, on numerous occasions, argued that the IE invaders annihilated the indigenous 'Old European' inhabitants of Eastern Europe on their way to conquering the remainder of Europe, Central Asia, and the Indian subcontinent (§3.4). Although instances of violent conquest and genocide were by no means rare in the ancient world, slaughter on such a grand scale taxes credibility in the timeframe under question. Put simply, the steppes of Central Asia could not have supported a population large enough to effect the permanent expansion of PIE into such a vast amount of densely-populated territory, especially over the course of only two

¹⁰ Beekes also criticized Renfrew on the basis of incompatibilities in the lexicon, specifically in the names of certain animals. Lehmann noted, though, that often such terminology was misapplied, i.e. there was a switch in referent, e.g. 'camel' and 'hippopotamus' in PIE ('Linguistic Structure as Diacritic Evidence' 2-3).

millennia (see §3.3). Such an event required at least one thing: a population large enough to carry their language(s) and lifeways out of their homeland and settle in significant enough numbers that they remained (at least numerically) dominant. Nor is this mere idle speculation. Pre-modern examples of large-scale conquest, migration, or the geographical expansion of a language substantiate this claim. Most such instances were relatively short-lived, e.g. the conquests of Attila the Hun, Alexander the Great, or Chingiz Khan (not to mention such cases as the Scythians or Sarmatians). While in some cases the political, ethnic, or linguistic consequences had a lasting effect, none of these examples displayed the permanence of the Indo-Europeanization of Europe and Western Eurasia. On the other hand, examples of permanent linguistic conquests of large amounts of territory, such as the expansion and consolidation of the Roman Empire in Western and Central Europe, display certain traits, most notably the immigration of large enough numbers of settlers to maintain the new cultural, linguistic, and/or political norms, as well as the encouragement of assimilation of the conquered population to the language and culture of the invaders.

Also, a relatively higher level of technological and social development than the indigenous population would have facilitated more rapid linguistic and cultural assimilation on the part of the native population. Therefore, despite the fact that we cannot definitively link the spread of agriculture with the spread of PIE, we cannot accept arguments such as Beekes' or Mallory's. While Renfrew's conclusions regarding the PIE homeland may or may not be correct, what this work did

accomplish admirably was to get scholars thinking along different lines. Much scholarship has gone into this question over the last few decades.

Moving from PIE homeland and expansion theories to Slavonic homeland and expansion theories, the situation is equally as complex, and debate is every bit as intense. The proof normally cited when trying to place the origin of the Slavs both chronologically and geographically fell into two broad categories: circumstantial evidence based on such things as place or river names, or the Proto-Slavonic lexicon and the writings about them by the more civilised peoples that they came into contact with.

In the first instance, the evidence often brought to bear included first the lack of certain words in Proto-Slavonic, examples of which include one of the words for 'boat' (*korab* 'b borrowed from Gk *καράβιον*), certain tree names (which has led some to then posit the original Slavonic homeland with certain climatic zones), military terminology borrowed mainly from Germanic, and above all, the lack of Slavonic toponyms outside of the posited homeland as well as the fact that no chroniclers specifically refer to the Slavs by name until well into the Common Era.

Regarding gaps in the proto-lexicon, whether for certain items of technology or species of plant or animal, we found the conclusions based on this evidence dubious. Language is a fluid entity, and the lexicon is that element of it that is the

first to display the results of contact. While it is well-attested that it is common for the term for a previously-unknown item to be borrowed directly from the donor language, it is dangerous to assume that because a native word was not attested, it was absent. In addition, the meaning of a given word may change not only temporally, but spatially as well. Numerous examples of the above phenomenon could be cited, but the point is that even among speakers of the same language, the same word does not always mean the same thing.

Nevertheless, prolonged contact with speakers of other languages can cause native words to be replaced. Although Slavonic borrowed the term for boat from Greek, a native word does exist (*lodka*), and it is inconceivable that groups of people who settled near rivers, which were trade arteries for millennia before literacy was established in these regions were not familiar with the idea of travelling over water. Not only is it inconceivable, but the Emperor Maurice, in his Strategikon wrote of the skill of the Slavs in amphibious warfare.

Regarding the second major source of material dealing with the Early Slavs, i.e. contemporary sources, great care must be exercised in the use of these. To begin with, Herodotus' History is often quoted when discussing the Scythians. No mention of the Slavs was made therein by that name. He did however mention a tribe living near, yet distinct from the Scythians, which he called the *Neuri*. What precisely his criteria were for differentiating them is not known, aside from the fact that they lived north of the Scythians.

It should be pointed out that many of these were fully or semi-legendary. Again, on what basis did Jordanes divide the peoples living in the lands of the 'Scythians', and from where did he get his information? In the prefaces of his chronicle, he stated that

You urge me to leave the little work I have in hand, that is, the abbreviation of the Chronicles, and to condense in my own style in this small book the twelve volumes of the Senator on the origin and deeds of the Getae from olden time to the present day, descending through the generations of the kings [...] But above every burden is the fact that I have no access to his books that I might follow his thought [...] Still—and let me lie not—I have in times past read the books a second time [...] The words I recall not, but the sense and the deeds related I think I retain entire.' (Mierow 1)

If the author himself admitted that the work was not his originally, did not have at hand the original manuscript that he was referring to, and professed doubt about the accuracy of his own memory, is it not presumptuous of scholars in the present to accept this work as a primary source at face value? Similar criticisms apply to another often-quoted work discussing the Slavs: De Bellis (written in the same century as The Origins and Deeds of the Goths) by Procopius of Caesarea. While the chronicle is, as far as ascertainable, the original work of the author, there are conflicts with other contemporary sources, specifically Jordanes, regarding the description of the Slavonic tribes raiding into the Byzantine Empire and their origins. As Schenker

wrote, '[t]ransfers of names from one ethnic group to another have frequently occurred in history and signify no more than some kind of spatial and temporal contiguity between the two communities'. (Dawn of Slavic 3) Further evidence substantiating this point comes from Watson, who discussed ethnonyms in Muslim documents dealing with Rus'.

The traditionally-held view that the word Saqāliba referred exclusively to Slavs has been abandoned by many scholars [...] who prefer to translate the word to include Scandinavians and Finno-Ugrians along with various Slavic groups. (423)

On this topic, note also al-Mas'ūdi,

The Rūs (consist) of numerous peoples composed of diverse kinds. Amongst them are a kind called al-Lūdh'āna and they are the most numerous. They frequently visit, for the purpose of trade, the land of Spain, Rome, and Constantinople. (qtd. Golden 90)

One could take this line of reasoning further; if those writing about a community had no direct knowledge of the group in question, no direct knowledge of their language or customs, then how can modern scholars assume that there was even any 'spatial or temporal contiguity' to speak of? At several points, Schenker himself referred to this phenomenon of misappellation of ethnonyms by the Classical and medieval chroniclers. In one instance he discussed '[...] the Greek habit of referring

to all non-Turkic peoples living across the Danube as Scythians.' (ibid. 6, fn. 11),¹¹ and later, in reference to the work of Gregory of Tours, the fact that the term 'Huns' was used as a catch-all name for peoples living outside the borders of the 'civilized' European realms (ibid. 10). Yet another confirmation of this phenomenon was provided by Procopius, who allegedly did not differentiate between Huns and Slavs (ibid. 16).

The sources mentioned above are only two of the many chronicles that began to appear as the Slavs made their presence known in the first millennium of the Common Era. In principle, the criticisms of these sources would apply equally as well to many other works. The only valid primary source when attempting to place the Slavs' whereabouts in antiquity would be one written by those with direct knowledge of the communities in question, and ideally their languages. No such source exists for the period in question. Even the Slavonic chronicles, which were used in more recent times to support the Danubian theory of the Proto-Slavonic homeland, are not reliable.

One can cite environmental factors as one of the core issues of the drive of various groups from less civilized lands towards the imperial borders. The notion of wealth was very much linked to the land by many of the peoples that settled in this region. Instead of a mere thirst for destruction, sweeping into Europe with their 'unheard of flattened faces and slanting eyes' (Lawrence 24), it is far more probable

¹¹ Notable examples include the use of the term 'Scythian' in Latin sources (Hartranft 375, 377). Apparently this practice was quite widespread, cf. Col. 3:11 (RSV) 'Here there cannot be Greek and Jew, circumcised and uncircumcised, barbarian, Scythian, slave, free man [...]'.
182

that the natural wealth of the steppes and forests, compared to the harsher conditions of the arid and semi-arid reaches of Central Asia, as well as the rumour of riches to be had from trade with the Greeks and Romans, drew both large and small groups from the hinterlands of the north and east. The drive of the Varangians to take control of the waterways from the Baltic to the Black Sea has been well established, but there was a further dimension to the relationship between agriculture, trade and wealth. The leader of the Utrigurs, a group of Asian peoples, in correspondence with the Emperor Justinian, is reported to have pleaded '[w]hile we eke out our existence in a deserted and thoroughly unproductive land, the Kutrigurs are at liberty to traffic in corn and to revel in their wine cellars and to live on the fat of the land.' (Obolensky, Byzantium and the Slavs 308) Furthermore, the commercial enterprises of the earliest documented Central Asian invaders of the steppes, the Cimmerians, to the latest, the Khazars, provide ample evidence that unbridled destruction was not the primary motivation behind either small- or large-scale migrations. Undoubtedly, the times were violent, and it was not unheard of for individuals or groups to take what they wanted by force, but it seems that these peoples were drawn by the prospect of wealth, not destruction.

The central point is that regardless of time period, and cultures under discussion, whether they were Greeks, Scythians, Slavs, Khazars, or any other combination of cultural or linguistic groups meeting and interacting, borders on a map were not impermeable boundaries. Linguistic, cultural, and political dynamics emerged along such lines of contact. Again, the impact of climate and geography on such

demographic movements and inter-linguistic/cultural situations cannot be underestimated.

The harsher climate, poorer soil, and heavily forested terrain in the northern Carpathians meant that agriculture was less productive and more difficult. This, in turn, meant that the area was less densely populated than the warmer regions to the south, and also that the rate of population growth was slower. The general lack of metal deposits meant that the ancestors of the Slavs were less technologically advanced than their IE cousins to the south, as well as the Indo-Iranian, and later Turkic nomads from the east. The Slavonic material culture remained 'austere' and 'nondescript' until the Slavs came into prolonged, intensive contact with the steppe pastoralists and the Mediterranean civilisations.¹² The dynamic between the steppe and forest zones, whose most frequent manifestation was ethnic flux and political instability, did little to foster an environment in which the peaceful exchange of ideas could occur. On the contrary, the situation was frequently one characterized by rapid and frequent Élite Dominance and System Collapse scenarios. Barford argued that the populations of the Danube basin and Balkans were more prone to cultural and linguistic assimilation. This may have been the case, but he failed to identify any particular traits of a culture which make it more receptive to foreign influence. We are compelled to wonder if the population in these areas was not already, to some degree, composed of significant numbers of Slavs, who had, for reasons unknown, failed to assert a distinctive ethnic or linguistic identity until the 5th century. As a tentative answer, Ehrlich argued that cultural areas in the ancient world often

¹² Vlasto wrote that outside of Greece, the Slavs remained 'largely' unaffected' by the civilized world until the arrival of German missionaries (13).

remained consistent and distinct despite political flux (217).¹³ Therefore, the ostensibly rapid Slavicization of the Danube basin, Pontic steppes, and northern Balkan peninsula could be viewed as a reassertion of indigenous Slavonic identity under favourable circumstances, rather than as the intrusion of a new ethno-linguistic element. If the Slavonic material culture was so primitive and lacked any prestige whatsoever when compared to the luxury of the Byzantines or the martial prowess of the steppe nomads, then what would cause the communities of the Balkans to adopt their way of life so quickly? If the population was, biologically speaking, unable to increase rapidly enough to displace the previous inhabitants, then that cannot be the answer. At the time of writing, a definitive answer to this question is extremely elusive. It requires a radical re-evaluation of archaeological evidence (as well as a higher degree of precision in genetic research), and reliable resources are not currently available to substantiate our tentative claim. It is our hope that such resources will become available in the foreseeable future, as we are convinced that traditional models cannot adequately account for either IE or Slavonic linguistic expansion.

3.15 Summary

The weight of the evidence outlined above casts the traditional theories of Slavonic origin into serious doubt. Regardless of whether or not Renfrew's theory of an Anatolian homeland of the IE-speaking peoples is accurate, the model by which he explained their subsequent expansion into Europe and Eurasia, i.e. as a result of the

¹³ See also Della Volpe for a discussion of architectural continuity between the Neolithic and Bronze Age in Eastern Europe.

development of agriculture causing a large-scale population expansion, is more compelling than the traditional theories of random migrations of compact ethno-linguistic units. Furthermore, the circumstantial linguistic evidence used to place the Slavonic homeland and date the disintegration of Slavonic linguistic unity is highly suspect. Specifically, what is disputable is not whether the North Carpathian archaeological culture represents the Proto-Slavonic presence, but whether this is the beginning point on the timeline of early Slavonic history. Such criteria as gaps in the proto-lexicon and presence or absence of demonstrably Slavonic onomastic material are not indisputable proof of a Slavonic-speaking presence or absence in a given area. Finally, the chronicles, histories, and other writings pertaining either to Eastern Europe or its inhabitants have been inappropriately interpreted.

Substantial questions arise out of this, namely, how do we account for the significant gaps in time between the arrival of PIE, its disintegration, and the subsequent disintegration of the ancestral Slavonic dialect? It is difficult, if not impossible, to offer a viable solution to this problem without accepting that, in general, languages can undergo lengthy periods of equilibrium, during which little or no significant change occurs. The next requirement is to identify these periods of equilibrium, as well as the punctuation events that separate them. As an initial hypothesis, it seems only logical to attempt to correlate momentous historical events with equally significant changes in the structure of the language(s) under question. Any event that caused a major increase, decrease, or movement of a population, either isolating it or bringing it into contact with other cultures would certainly have some sort of effect on the language, even if such an effect only amounts to a few lexical

borrowings. The history of the Indo-European peoples, and later the Slavs, has been shaped by several events, the importance of which can barely be understated. These include the Neolithic and Secondary Products Revolutions, and later dynamics between the steppes of Eurasia and the agricultural, urbanized civilizations of Europe and the Near East. The Slavs occupied a unique position during these periods; for much of this time, they were isolated in the forests and mountains of Central and Eastern Europe. It was only comparatively recently that they emerged into the awareness of their neighbours and began to exert an influence on the history of this region. Simultaneously, their language seems to have come out of the hibernation of the prehistoric period, displaying the results of the increasing contact with neighbouring languages in the form of accelerated diversification. The next chapter will attempt to correlate these significant historical events with specific changes or groups of changes in the languages themselves.

Chapter 4: Language

4.1 Introductory Remarks

The second chapter of this work outlined a model accounting for linguistic change over time and across distance.¹ In the third chapter, an analysis of the archaeology and history of Eastern and Central Europe, with an emphasis on the cultural development of the Slavonic tribes was provided, the crux of which was that the descendants of certain groups have occupied certain territories for much longer than traditionally thought. Something of a quandary remains; either the theory detailing the Neolithic inhabitation of Europe, Central Asia, and the northern half of the Indian subcontinent is false, or there lingers a span of several millennia which needs to be accounted for in an attempt to revise both the history of Indo-European in general, and Slavonic specifically. The evidence provided by such authorities as Renfrew, Gamkrelidze and Ivanov, Diakonov, and others for an Indo-European dispersal is more compelling than that offered by traditionalists such as Gimbutas, Mallory, and their colleagues. Thus, the final task is twofold: to substantiate the claim that language change is ultimately motivated by language contact with concrete evidence on the one hand, and on the other the challenge is to provide an explanation of what, linguistically speaking, transpired (or did not transpire) between the arrival of agriculturalist Indo-European speakers in Eastern Europe and the ultimate dissolution of Slavonic linguistic unity ca. 1000 CE. Even though it is here argued that the link between history, geography, and language is dynamic and concrete, it is

¹ Implicit in this was not only physical distance, but social, as the degree of stratification in a community can establish and maintain barriers which are rather difficult to transcend.

not argued that every historical event was, as a matter of necessity, reflected in the history of the language. The significance of a historical event must be measured by its effects. Thus we might pose the following questions: was a technique developed that caused a rapid and significant increase in population, such that a previously small linguistic enclave expanded at the expense of its neighbours? Did an environmental catastrophe occur, such that an entire population was eliminated or displaced? Did a political change take place, resulting in the decrease in usage of one language to the advantage of another, or even the influx of a large number of loan words and/or grammatical constructions? As Diakonoff noted,

[...L]anguage contact occurs always as the result of extralinguistic factors; therefore, if we are to study the meaning of language contact, we must also understand the historical, cultural, and anthropological contacts which may be involved. (53)

Certainly, as noted earlier (§3.13), one must expect some degree of discontinuity between the archaeological record and the linguistic history, and it would be folly to claim that any given material culture represents *in toto* the physical remains of a given linguistic community. Still, a refusal to attempt to correlate the historical and archaeological record with the linguistic one does not safeguard the purity of the reconstructed language. It merely retards the progress of historical linguists by ensuring that our chronologies will only ever be relative, and not absolute (although until recently the lack of an absolute chronology made relative chronologies essential). Because languages are spatiotemporally bounded entities, they existed in a certain place for a certain amount of time. In theory, at least, if the requisite amount

of evidence is available to validate a claim that a language was spoken in a certain place for a certain amount of time. The task then, is to collect enough reliable evidence to place prehistoric or protohistoric languages temporally and spatially. Until the time of writing, this has been exceedingly difficult. It is our hope that bringing an interdisciplinary perspective to the topic of language change will accelerate the development of more and more accurate relative chronologies of the histories of languages. As far as the present situation is concerned, though, it seems better to have an absolute chronology that can be debated, and rejected or validated over time, than an ephemeral and inadequate relative chronology that serves only immediate and superficial needs.

As mentioned earlier, one difficulty with studying the history of an individual language or language family is the convincing division into distinct historical and, to a lesser extent, geographical entities. By linking the changes and/or groups of changes to specific historical events or trends, it will be demonstrated that linguistic changes were not merely coincidental with historical events, but were caused by them. Each event in the long history of the Slavonic language family can be viewed as the result of either the effects of a punctuation event(s) (most often a divergence scenario) or a state of equilibrium (where either convergence or advergence² processes were at work).³

² The term 'advergence' is used here in place of 'dialect contact', defined by Renfrew as '...an alternative to convergence for those cases where the languages interacting...are themselves already members of the same language family [...]' ('10 000 or 5000 Years Ago' 418).

³ See §§4.14-4.23

One priority of any rigorous historical linguistic study is to separate out elements of the language that were inherited from an earlier stage from those that were borrowed from other languages, or developed independently of any external influences. This initial point is crucial to the work at hand, since it has been claimed that relatively few linguistic novelties develop or developed *entirely* in isolation from any external influences, regardless of whether they left an obvious trace in the language or not. Therefore, as complete an examination as the limitations of space will allow is necessary to accurately distinguish between inherited and borrowed elements. This in itself can be somewhat complex.

[...T]he difference between "loan word" and inherited term is purely temporal, the former merely reflecting cultural elements integrated at a later date into the common language. (Polomé, 'Isoglosses and the Reconstruction of the IE Dialectal Split' 291)

It is imperative to remain aware that theoretical constructs seeking to explain linguistic evolution are only that; while they may or may not be verified by actual evidence, at some level it must be recognized that today's linguistic innovation or borrowing may well be the inheritance of subsequent generations. Even the most ancient elements held in common between Slavonic and the other branches of IE may well have originated outside the Proto-Indo-European speech community. They may merely have been borrowed at a time when the PIE speech community was still relatively unified.

4.2 10, 000 Years BP: Pre-Proto-Indo-European

Due to the pervasiveness of the *Stammbaum* and the largely unassailable position it enjoyed as the definitive model of the development of the IE languages, it has often been assumed that PIE evolved into fifteen or more different subgroups as its speakers carried it into the uninhabited or sparsely inhabited regions adjacent to them. According to this view, as 'Proto-Indo-Europeans' spread further and further from its homeland, the primordial uniformity of their language disintegrated due to estrangement and isolation. This model is illustrated in Figure 4.1 below.

Implicit in the traditional *Stammbaum* classification are several things, as noted above in Chapter 2, most remarkably that something extraordinary happened when PIE split into not one, two, or three daughter languages, but *fifteen*. What does this indicate? Much speculation has been made; that PIE was not a unified language to begin with, but a group of dialects that, due to areal convergence came to resemble each other over time, to a greater or lesser extent. This was the view of Trubetskoy, advanced in his article 'Thoughts on the Indo-European Problem' (87-99).

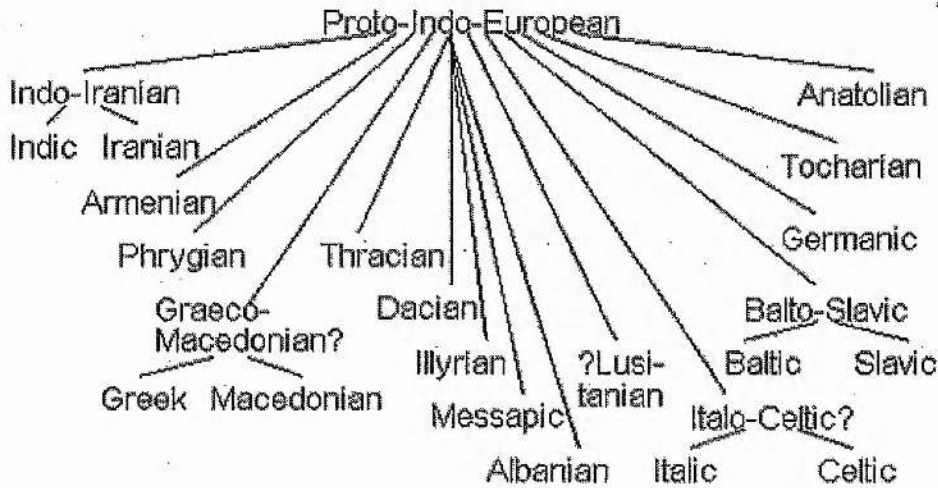


Figure 4.1 the Indo-European languages (<http://iasnt.leidenuniv.nl/pie/ielangs/iediagram.gif>)

Though he advanced strong arguments, his thesis was rather extreme and simplistic. The sheer weight of lexical cognates and shared grammatical constructions precludes such total convergence, even over such a long span of time. Note that near-complete convergence *is* possible under certain circumstances, e.g. the aboriginal Australian languages described by Dixon. This situation developed under geographically limited circumstances, though. In the case of Indo-European, the ancestor language was spoken in an area which was at a crossroads between Europe, Asia, and the Middle East. The fact that PIE developed near the centre of the Eurasian landmass (and at a hub of the emergent agricultural lifeway) meant that the demographic processes working over ten millennia operated in a significantly different fashion than similar processes which operated in pre-colonial Australia.

Regarding the supposed evolution from one unified language into fifteen, as Dixon noted, such an event would have probably been unique in the history of human language. Therefore, it probably did not happen in the way that is depicted in the *Stammbaum*. Rather, the disintegration probably occurred in stages, much in the same manner as more recent instances of linguistic change, e.g. the disintegration of Latin into the various Romance dialects. The position adopted here is one in support of the re-classification of PIE into several distinct strata (incorporating aspects of Adrados', Sturtevant's, Lehmann's [Pre-Indo-European], and Meid's arguments), corresponding either to proposed migrations (linguistic or demic) out of the Anatolian homeland, or technological developments that had deleterious effect on the original linguistic unity, on the one hand, and the increasing morphonological complexity of PIE on the other.

Such isoglosses as the opposition between Anatolian PIE and Balkan PIE, *centum-satem* and others indicate that the situation was somewhat more complex than it might have initially seemed. Scholars have recently proposed an earlier, Pre-Proto-Indo-European language, in order to account for the isoglosses separating various branches of PIE. Specifically, the earliest division within PIE is now considered to be between Anatolian on the one hand, and the ancestor of the remainder of the IE languages on the other ('Balkan Proto-Indo-European'). Sturtevant was the first to advocate what he dubbed the 'Indo-Hittite' hypothesis, and it has recently been re-examined by not only linguists, but scholars from other disciplines as well.

[...T]he flat view of Indo-European as a single language from which different, more or less contemporary 'sister' branches sprang by a series of migrations is an over-simplification; and [...] it is necessary to "map out a history of the development of the theory of IE. [sic] conceived of as a series of successive strata [...]' (Adrados 2; Renfrew 'Time Depth, Convergence Theory, and Innovation in Proto-Indo-European: 'Old Europe' as a PIE Linguistic Area' 258)

What one envisages, rather, is a series of transformations from one 'stratum' of Proto-Indo-European to the next, each with its own regional morphological and lexical innovations [...] 'Proto-Indo-European' [...] is a term no longer to be seen as describing a single linguistic entity, but one which refers rather to the complex series of changes in different regions and periods, both in Europe and in western Asia, between the earliest Anatolian Pre-Proto-Indo-European (or Proto-Indo-Hittite) on the one hand, and the earliest languages for which we have actual documentation in each region on the other. (Renfrew, 'Time Depth' 260.)

[...I]f we refuse to exclude the previous linguistic history of Indo-European, if we refuse to banish it to some place outside the scope of our reconstruction, but rather try to integrate it into our model of reconstruction, we can see that conflicting traits of different Indo-European languages may reflect different stages of the diachronic history of Indo-European. These traits...may reflect earlier traits of the parent language which had been abandoned when *b* [a later off-shoot of PIE]

started off, but fail to reflect the most recent developments [...] (Meid 12-13)

The hypothesis is illustrated in the following diagram, and the specific characteristics of the relevant individual strata will be discussed in the next section.

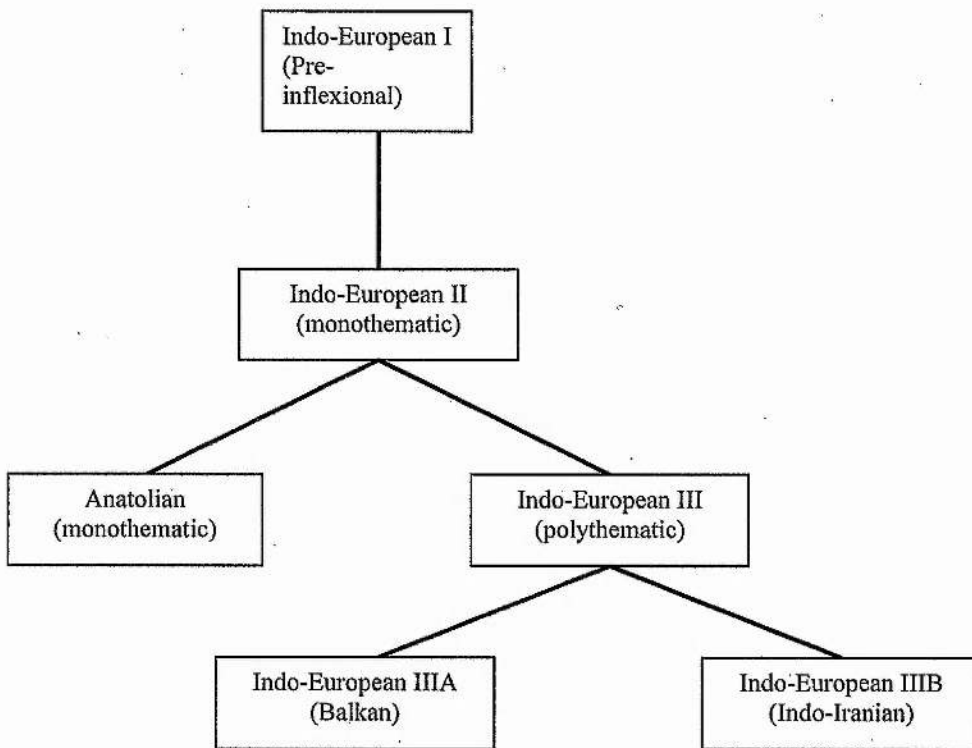


Figure 4.2 (adapted from Adrados)

Slavonic, as indicated by the diagram, developed out of IE IIIA. The initial split, as illustrated above, occurred as the rapidly-increasing speakers of what became IE III moved into the Balkan peninsula, as the resources in Anatolia were too few to support the increasing population. The initial demic diffusion had carried IE-speaking

agriculturalist groups well into Europe (the mid-Danube, Bug, and Dniester basins) between the seventh and sixth millennia BCE.

In addition to the traditional IE homeland theories of Gimbutas, Mallory, and others surveyed in the previous chapter, Nichols ('The epicentre of the Indo-European linguistic spread'; 'The Eurasian spread zone and the Indo-European dispersal') advanced a theory, whereby she attempted to account for the IE homeland and subsequent expansion on purely linguistic grounds by noting loanword trajectories in order to account for the locus, range, and trajectory of PIE spread. Using a simple method of tallying potential cognates between several language families (IE, Semitic, Turkic, Nakh-Daghestani, and Northwest Caucasian), she attempted to locate the Indo-Europeans in space as well as time. While much of this was reminiscent of glottochronology and its inherent disregard for the realities expressed by the principles of Uniformitarianism and Catastrophism (§2.6), it is interesting to note that there are potential cognates dating back to the Early Bronze Age (or earlier—while a reasonable date of the demise of PIE is becoming increasingly certain, the date of its 'birth' has yet to be ascertained) between some of these language families. However, there are some indicators of the potential age of PIE. These indicators are the results of the application of the Comparative Method to the above-mentioned indigenous language families of the region.

It is interesting to note that Early PIE, like Northwest Caucasian and Nakh-Daghestani exhibited a larger consonantal inventory and a relatively impoverished

vocalic inventory. This is by no means an argument for any deeper phyletic connections. Such speculation is exceedingly risky, as the evidence has been all but obscured by the passage of time, and to advance such proposals on the basis of reconstructions is tenuous at best. However, it is interesting to note this commonality between three apparently unrelated language families. It seems that there was some sort of areal convergence prior to the Neolithic expansion of PIE, or the ancient Indo-European tribes were in contact with the Neolithic and Bronze Age inhabitants of the Caucasus. At this point, we have no conclusive evidence as to why such a relationship would have left traces only in the phonology of IE, and not in the lexicon.

As a tentative suggestion as to why this might be the case, we note that certain modern Northwest Caucasian languages, e.g. Kabardian, lack words in the conventional sense. Furthermore, the ergative-absolutive syntax and agglutinative morphosyntax mean that they lack sentences in the usual, Indo-European sense. The format that a standard utterance is couched in has been dubbed by Colarusso 'the word-sentence', being a cohesive unit largely lacking discreet sub-units, but being 'smaller' than a sentence. As a result, the lexica of these languages are profoundly different than those of neighbouring IE languages, being composed largely of individual morphemes (both free and bound). Thus, any shared vocabulary could be concealed not only by several millennia of standard, phonological evolution, but also by a typological shift, which fused previously separate morphemes. Some scholars,

e.g. Gamkrelidze and Ivanov, asserted that '[i]t can be claimed that the Indo-European morphophonological system is isomorphic to that of Common Kartvelian [...]' (220).⁴

p'	t'	k'	q'
b	d	g	
p ^h	t ^h	k ^h	q ^h
s	s ^y	š	
z	z ^y	ž	

Figure 4.3: the Proto-Kartvelian consonantal inventory (Gamkrelidze and Ivanov 117)

p'	t'	t' ^w	k ^y	k'	k ^{yw}	q ^y	q'	q' ^w		
b	d	d ^w	g ^y	g	g ^w					
p ^h	t ^h	t ^{hw}	k ^{yh}	k ^h	k ^{hw}				q ^h	q ^{hw}
s	s ^y	š	š ^w	š	š ^w					
z	z ^y	ž	ž ^w	ž	ž ^w					

Figure 4.4: the modern Abkhaz consonantal inventory (ibid.)

⁴ See Hopper (138) for another analysis of typological parallels between PIE, Proto-Semitic, and Proto-Northwest Caucasian.

Comparison of these partial consonantal inventories to figure 4.6 shows more than a passing resemblance; it is highly likely that convergence, i.e. language contact, bore all of the responsibility for the similarity between the phonological inventories of (P)PIE and Prehistoric Caucasian. Gamkrelidze and Ivanov also noted that the phonemic inventory of Proto-Semitic bore a strong resemblance to that of PPIE and later PIE (118). Typologically similar to the famous PIE stop contrast +voice, +aspirated~voice, +aspirated~voice, -aspirated, Proto-Semitic apparently displayed the tripartite stop opposition of +ejective~+voice, -aspirated~voice, +aspirated.

Certainly, at least Proto-Nakh-Daghestani and PIE were not that far removed from each other geographically so as to preclude Late-Neolithic/Early Bronze Age contacts. It has already been established that Hattic, a linguistic contemporary of Hittite (the evidence for which, in addition to mention in Hittite records, is a large cache of inscriptions from the Boghazköy library) was a Northwest Caucasian language, and not indigenous to Anatolia (Ivanov 1985; Diakonov). What is also known is that trade routes did exist since deepest antiquity (a sort of 'Proto-Silk Road'), which connected Anatolia, Mesopotamia, Central Asia, and the Caucasus. It is not outside the realm of reason to hypothesize that as demographic pressure intensified beginning in the Early Bronze Age, and the Indo-European speaking tribes continued to spread via agriculture, the erosion of ancient connections between northern Mesopotamia/Anatolia and the Caucasus accelerated. As the Caucasian peoples were repeatedly driven higher and higher into the mountain valleys, and wave after wave of invading languages and peoples occupied the area in between, subsequent geographical isolation impeded contact in the Caucasus (with the

exception of advergence processes on the local level), communication became increasingly difficult due to the difficult terrain and increasingly hostile neighbours, while increased contact with groups speaking other languages on the ever-expanding IE periphery stimulated the fragmentation of the PIE dialects, indicated in part by a growing number of vocalic phonemes and a simultaneously shrinking consonantal inventory.

Thus, the following timeline for the evolution of Indo-European (and Slavonic) is suggested. The Proto-Indo-European period lasted roughly until the establishment of agriculture as the primary economy in Anatolia approximately ten thousand years before the present, and declined as IE III developed on the Balkan peninsula between the eighth and sixth millennia BCE. The subsequent Secondary Products Revolution (ca. 4000 BCE) allowed the communities on the eastern periphery of the PIE area to expand into the Pontic steppes, eventually to reach Chinese Turkestan (Tocharian), Persia (Iranian), and the Indian subcontinent (Indic). During the Middle Bronze Age (3rd millennium BCE), increased demographic and social pressure resulted in rapid, compact waves of migration and resultant population displacement.⁵ The mid 4th -mid 3rd millennia BCE seem to be periods of increased unrest, as evidenced by the archaeological record, and may be considered analogous to the Balto-Slavonic period. Finally, the beginning of the Slavonic period may be correlated with the Late Bronze and Iron Ages, and concluding approximately 1000 CE.

⁵ Such events presume a build-up to a critical mass point, and perhaps also presume some sort of environmental or political 'catastrophe', sparking a 'domino effect'.

Figure 4.5 is an illustration of the chronology of divergences in the Indo-European language family, as calculated by (Ringe and Warnow, 1997). Although this too is a *Stammbaum* of sorts, it picks up where Schleicher left off by arranging the divergences chronologically, so that when the splits are correlated with historical and archaeological evidence, an absolute chronology emerges.⁶ The hatched-line boxes correspond to phases of advergence (or perhaps lack of divergence), implicit in which is a chronological framework (after Renfrew, '10,000 or 5000 Years Ago' 425). Note that the illustration implies that these were not necessarily hallmarks of 'centre v. periphery' or 'east v. west', but more likely indicators of the intensity of contact-induced divergence. Similar, though not identical, was the aspirated v. non-aspirated isogloss. The languages which did not develop aspiration (except Indic) tended to have diverged later.

The Slavonic period is often divided into the Proto-Slavonic and Common Slavonic sub-periods, which themselves may be further divided depending on how precise one wishes to be. Slavonic linguistic unity had effectively disintegrated by the end of the first millennium CE; in actual fact, Late Common Slavonic probably began to disintegrate much earlier (6th-7th centuries CE).⁷ It must be remembered that the translations into the Thessalonikan dialect of Slavonic by St. Constantine-Cyril were reportedly intelligible to the Moravian Slavs. This would indicate a very high degree of mutual intelligibility still present throughout the southern and western

⁶ According to Renfrew ('10,000 or 5000 Years Ago 420), '[...] the only indication of time that can be inferred is through ancestry.' However, he proceeded to illustrate time as a factor by inserting the boxes excluding certain branches of the tree, thereby indicating phases of common historical development

⁷ Belić (1922) reckoned the upper limit of CSI to be ca. 500 CE, while Mayer set it at the 9th c. CE.

extremities of the Slavonic-speaking world in the 9th c. CE. Arguably, the phonology of OCS was almost identical to LCS.

On the following pages, the focus is the development of Slavonic, beginning with PPIE. It shall be argued that profound, catastrophic linguistic events tended to occur in rapid succession, during short periods of 'linguistic disruption', followed by longer periods marked by either areal convergence or relative linguistic inertia.

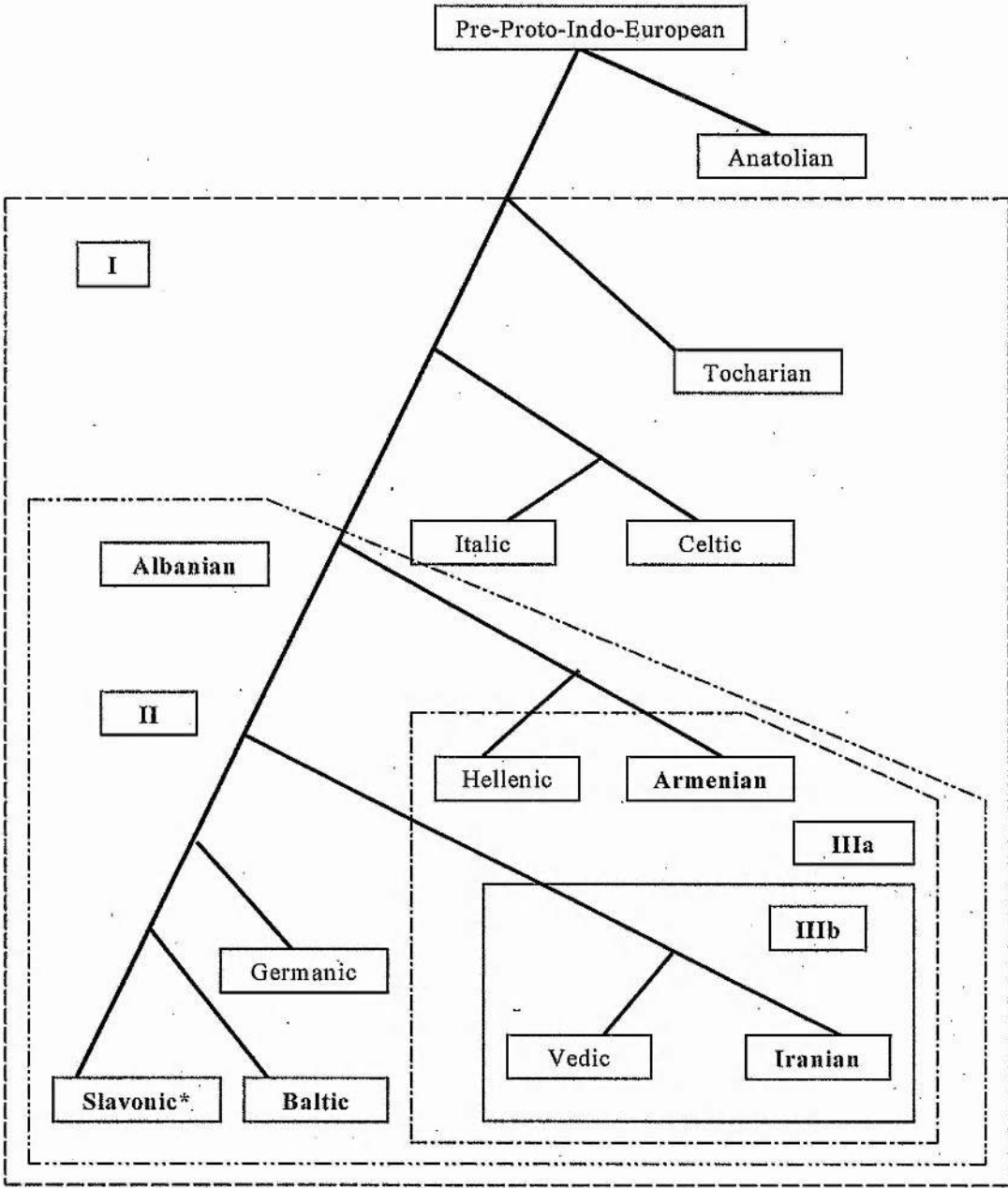


Figure 4.5 (adapted from Renfrew [10,000 or 5000 Years Ago' 425.]

4.3 The Grammatical Structures of Pre-Proto-Indo-European

The Slavonic languages are, ultimately, descendants of the Balkan Proto-Indo-European dialects illustrated linguistically in fig. 4.2 as Indo-European IIIa (Indo-Greek) and historically in fig. 4.5 as members of Phase II. As such, the investigator can point to a given stage in the development of 'mainstream' Balkan PIE, and identify it as a stage in the development of the Slavonic languages. Furthermore, one can then refer to the reconstructed grammar and lexicon of this particular stage of (P)PIE, recognizing it as ancestral to Slavonic (and other IE language families). The final element of such an exercise might be to track the changes (attested and reconstructed) that turned Balkan PIE into Slavonic. Keeping in mind that

[...]it must be conceded that [...] a reconstruction is something of a fiction, since 'the terms *Proto-*, *Ur-*, *Primitive* are firmly attached to formulae which are timeless, non-dialectal, and non-phonetic'. (Shields, Indo-European Noun Inflection 3)

we shall proceed with a brief examination of the evolution of Balkan PIE, with a view to establishing the 'inheritance' of Slavonic, thereby identifying two general categories within Slavonic: specifically, what was innovated or borrowed, and generally, the relics of any instances of linguistic shift or substratum influence. The goal here is not to revolutionize Indo-European studies, but merely to present the ancestral Slavonic language in an organic, dynamic context: one that is grounded in a historical context, and adheres to a greater or lesser extent to the chronological framework expounded in Chapter 3 of this work.

The phonology and morphology of PIE are the most thoroughly investigated areas of that language. The bulk of nineteenth and early twentieth century research was devoted to reconstructing the phonemic inventory of PIE, and detecting the rules by which it operated. Schleicher, Schmidt, Bopp, Brugmann, Grimm, Trubetskoy, Saussure and others devoted time to comparing the regular correspondences between various phonemes in the modern IE languages, with the aim of detecting the original sound structures of the language. More recently, there has been a renewed interest in other aspects of PIE grammar, as models and theories from other branches of linguistics, e.g. sociolinguistics, linguistic paleontology, areal and typological linguistics, etc., have been applied to the Indo-European problem.

The picture that emerges of so-called 'Pre-Proto-Indo-European' is one that is in some ways markedly different from the highly intricate PIE reconstructed in the late nineteenth and early twentieth centuries. Although not of crucial importance to the development of Slavonic per se, these questions do draw attention to several important issues. Namely, the PIE situation was far more complex than initially thought, in addition to the fact that it is now generally recognized that PIE was anything but a homogeneous ethno-linguistic entity. While debate may still linger as to the type which PPIE belonged to, consensus has been building on the facts that a) PIE as such is to be understood as a dynamic entity, i.e. one which underwent several profound changes of its own, b) that these changes were directly related to the historical circumstances which have had an impact on the speakers of the PIE dialects, and c) that the intermittent stages are, to some extent, recoverable.

Aspects of this question are still hotly debated, and there are several competing reconstructions of PPIE, including those of Adrados, Shields (Indo-European Noun Inflection), and Lehmann (Pre-Indo-European), with additional contributions by such investigators as Schmalstieg (Indo-European Linguistics), Drinka and others. All of the above refer, to some extent or another, to the Indo-Hittite hypothesis of Sturtevant, which in turn is based on implications extrapolated from earlier works by Brugmann and Delbrück, Hirt, Saussure, Meillet and others. There has been recent debate as to whether or not PPIE was an ergative (or Governing, to use Lehmann's [Pre-Indo-European 3-6] terminology) or a nominative-accusative language. An ergative language was defined in Shields (Indo-European Noun Inflection) as one in which

[t]he marked member of the transitive predication is the agent (marked by a special *active* or *ergative* case) and the unmarked member is the patient (marked by the 'nominative' or 'absolutive' case, which also serves as the *substratum* of the intransitive predication). (17)

Thus, according to Shields, the only case markers at this stage of PPIE were the enclitics *-0 and *-r (for the ergative), and *-N (for the absolutive) (94). He indicated further that the notion of case, as found in Nominative-Accusative languages such as PIE, number, gender, and person were later developments (12-13). Lehmann (Pre-Indo-European) pointed out that '...handbooks before the publication in 1984 of the work by Gamkrelidze and Ivanov did not reconstruct the proto-language with a basic typological system in mind.' (4), thereby falling into the same trap as earlier scholars did, namely using '[...] reconstructed forms erroneously in parallel with their own findings for earlier millennia.' (ibid.)

He thus rejected the claim of Shields that PPIE was an ergative language, maintaining instead (after Klimov) that it was, at its earliest stages, a language of the Active type. Either claim corresponds roughly to the schema advocated by Adrados (see fig. 4.2 above), wherein the earliest IE was a non-inflecting language. Drawing on extensive 'résidue' (Lehmann, Pre-Indo-European 21) evidence, mainly from Latin, Greek, Hittite, and Sanskrit (supplemented by meagre evidence from the other IE languages), Lehmann identified the earliest stratum of IE as a language which is markedly different from the 'Brugmannian' reconstructed PIE, with its complex morphological system.

Furthermore, Lehmann referred to Klimov's (Principy; Tipologija) schema of typological development, which ranked language types in a progression from Active (defined below)→Ergative→(Nominative)-Accusative. Strangely, Lehmann did not posit an intermediate Ergative stage for PPIE, as did Shields (above), but maintained that PPIE made the significant 'jump' from Active to Nominative-Accusative. Regardless of whether or not PPIE did undergo an Ergative phase, the important point here is that an extremely profound change occurred at a point in the distant past; it is one thing for a language to undergo significant phonological restructuring, or broad-based morphological modification, e.g. the well-attested case syncretism that marked the transition from Latin to its various Romance descendants, but for a language to have been altered by speakers from an essentially isolating language (Shields, Indo-European Noun Inflection 12) lacking in all but the most basic morphological distinctions, to one with an extremely rich morphology, is quite significant. That being said, the typological 'jump' from PPIE to PIE is reminiscent of the processes

exhibited by agglutinating languages, whereby morphologically free particles [x] and [y] combine into inflection [xy] (often losing their status as independent morphemes in the process).

It is also significant that none of the works above offered any explanation of the cause of such a radical change. Earlier linguists, e.g. Specht, Brugmann, and others, assumed that such a change went hand-in-hand with the increasing complexity of IE culture and the relatively rapid technological advances of its speakers. This explanation seems superficially quite similar to the hypothesis advanced in the present work, but it must be remembered that implicit in this earlier argument is a prescriptive attitude: that PPIE and by extension PIE, were more 'primitive', i.e. less highly-evolved, stages of language, which is the sort of teleological view rejected in Chapter 2. Our argument is not that PPIE was some sort of less-evolved linguistic entity, which was superseded by more efficient, better systems of communication, but merely that PPIE, by virtue of its location on the timeline, was a more archaic, i.e. older (and more analytical), not a lower or more rudimentary linguistic entity. Historical events did indeed impact and shape the language(s) of the communities that experienced or instigated them, but historical events did not, in our view, make the language somehow less 'primitive'. A worthwhile example to keep in mind might be that of the modern Chinese languages; certain of these are of the isolating type, placing them 'lower' in terms of their evolutionary status on Klimov's hierarchy. If a language moves from type to type up the hierarchy in order to keep pace with the increasing complexity of the culture of its speakers, then China would either still be at

a Neolithic stage of cultural development, or the Chinese languages would have developed an inflectional morphology quite some time ago.

Returning to the point at hand, the evidence for a typological shift is quite compelling. Adrados, Lehmann, and Shields do seem to agree on one thing: that the morphology of PPIE was significantly less complex than that of PIE. The following schema is adapted from Lehmann (Pre-Indo-European 29-32) to illustrate the basic structure of an Active language.⁸

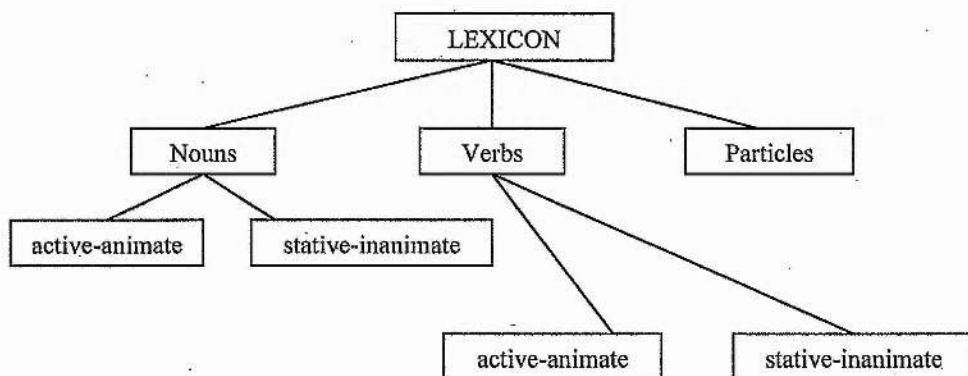


Figure 4.6: Active Language Structure

The key features of an Active language, and PPIE according to Lehmann, are as follows (ibid. 38-62). In the category of Verbs, there was no voice. Instead of the later distinction between active, middle, and passive, PPIE verbs exhibited 'version', whereby the action of the verbal root was either centripetal or centrifugal. The term centripetal denotes action that is directed away from the speaker, and centrifugal

⁸ Lehmann remarked that in a language of the active type, the 'lexicon is primary'. Compare this to the view of Generativists regarding the 'autonomy' of syntax

indicates action directed towards the speaker. This distinction in version evolved later into the distinction between verbal voice, where centripetal action became the middle voice, and centrifugal the active voice. Also, this concept of centripetal v. centrifugal action was expressed by the same root, but presumably differentiated by various particles. The IE dialects tended to choose between either version, but did not retain both. Furthermore, verbs displayed a distinction between active and stative, and this distinction manifested itself in the archaic PPIE verbal aspect. Later, in the PIE phase, the stative distinction gave rise to the perfect tense. Also noteworthy is that according to this model, the concept of transitivity was not expressed. Shields, however, argued for the presence of transitivity in PPIE (Indo-European Noun Inflection 19), presenting it as a basic requirement for Ergative constructions.

Adjectives would have been absent from this system, their function as modifiers expressed by stative verbs. Thus, verbs expressed version and aspect, with all other functions denoted by combinations of the large class of particles. Such verbal forms as the infinitive were apparently innovations belonging to the Late PIE period (Lehmann, Pre-Indo-European 113.)

Regarding the lexical class of Nouns, much like the Verbs, they were differentiated according to whether they were active or stative. PPIE lacked the distinction of grammatical gender, instead relying on a distinction between animate and inanimate. Cf. Hittite, which had 'common gender' (denoting masculine and feminine) and neuter (everything else) (Shields, Indo-European Noun Inflection 14-

15). Several IE relics were cited by Shields as evidence for this later development of grammatical gender, e.g. Lat. *agricola* 'farmer', *nauta*, 'sailor' and OCS *kamy*, 'stone' *sluga*, 'servant' and *vojevoda*, 'duke'. Such forms are considered evidence for the existence of an archaic common gender, itself a PIE innovation.

Furthermore, some scholars have argued that it is possible to determine the relative 'age' of certain nouns by examining their structure. Specht claimed that within the reconstructed PIE lexicon were several strata, distinguished by whether or they were [+] or [-] thematic. He noted that the majority of the terminology denoting items or processes related to agriculture, animal husbandry, as well as most kinship terms, was athematic, and therefore archaic belonging to the most archaic stratum of the lexicon. He postulated that this was evidence that the earliest PIE speaking tribes were not familiar with basic agriculture or animal husbandry. Interestingly, Specht also claimed that most nouns dealing with vehicular transport were thematic, and hence belonged to a later period of PIE. As we discussed above (§3.4), the archaeological record indicates that the beasts of burden available to peoples living in Central Asia, Eastern Europe, and the Pontic steppes were first used for traction, and only subsequent to the Secondary Products Revolution were horses (and other animals, e.g. camels) used for riding. Specht's work provides support to part of our argument—namely that the speakers of PIE were those Anatolians who either developed an agricultural economy or adopted it from their neighbours to the south in Mesopotamia and expanded across Europe and central and western Asia. PIE was, therefore, the pre-agricultural language of these peoples, and the earliest recoverable stratum of the lexicon reflects a pre-agricultural economy.

The large class of particles, which provided the formants for the later inflectional endings as well as the pronouns, were subdivided according to their syntactic function: Anaphoric/Deictic, Conjunctional, Negative-Interrogative, and Asseverative/Emphatic. The anaphoric/deictic class included **i* (general deixis), **se* (this), **te* (that), **ke* (here), **u* ('you-deixis'), **le* (distal deixis), and some others. Conjunctional particles included **k^we* (and), **we* (or), and potentially two others, whose reflexes are only attested in Greek. There were apparently only two negative/interrogative particles: **ne* and **me*. The nature of the Asseverative and Emphatic particles is, according to Lehmann's description, problematic, as he included **ō* (asseverative) and **ī* (such a) among their numbers, and it must be remembered that both vowels (other than /e/) as well as quantitative distinctions were absent until the Late PPIE-Early PIE period. Other particles of this class included **ge* (indeed), **g^he* (emphatic) and perhaps **r* ('also') (Lehmann, Pre-Indo-European 91-93).

Grammatical relationships within the PPIE sentence were not expressed through government, but rather agreement, i.e. stative nouns were paired with stative verbs, active nouns with active verbs, and agreement, possession, aspect, etc. were indicated by particles. The basic word order at this stage was probably SOV, with coordinate clauses set in sequence, whilst subordinate clauses at this time were absent.

Moving from the Lexicon to Morphology and Syntax, the default root formation is thought to have been (C)CVC(C) (ibid. 141). As particles were conflated

into inflections, beginning in the verbal category, it became possible to speak of derivational and inflectional morphology. The process of suffixation probably greatly increased the number of lexical items, and when roots from the PIE stage are examined, it is apparent that the majority of them are suffixed (ibid. 150-154). Finally, PPIE is thought to have exhibited a system of stress accent, which is linked both to the later increase in the vocalic inventory and ablaut.

Turning lastly to the posited phonemic inventory of PPIE, Lehmann devoted little discussion to this area, and even in that section most of the analysis centred on examinations of ablaut and prosody, which belong more properly to the early PIE period. We posit the following consonantal inventory, based on the work of Lehmann and Beekes:

		Stops			Resonants			Fricatives
Labial		p	P ^h	b	m		w	
Dental		t	T ^h	d	n	r	l	j
Velar	Plain	k	K ^h	g				
	Labial	k ^w	K ^{wh}	g ^w				
								s/z

	Palatal	k ^y	K ^{yh}	g ^y			
		ʔ				ʕ	ʕ ^w
		(H ₁)				(H ₂)	(H ₃)

Figure 4.7: the consonantal inventory of Pre-Proto-Indo-European (Lehmann, Pre-Indo-European 218; Beekes, 'The Nature of the Proto-Indo-European Laryngeals' 27-28)

The reconstruction of the aspirated series of stops has been especially problematic for scholars attempting to determine the phonological inventories of PPIE and PIE. In the first instance, it remains unclear whether or not there was a threefold or fourfold opposition, i.e. -voice, -aspirated/-voice +aspirated/+voice – aspirated/+voice +aspirated, or p/p^h/b^h/b, in 'actual' terms. The reason for this uncertainty is the conflicting evidence provided by Latin and Greek on the one hand, and Sanskrit on the other. Whereas in Latin and Greek, the aspirated stops tended to become voiceless, in Sanskrit they tended to be voiced. Therefore, the traditional Neogrammarian PIE consonantal inventory, which contained both voiced and voiceless aspirated stops was abandoned due to the irreconcilable differences between the eastern and western branches of IE. In place of the older fourfold system, a new theory was proposed in which the opposition was claimed to be between glottalized and non-glottalized stops, with a subsidiary distinction of ±voice among the non-glottalized stops. However, this newer Glottalic theory is not without shortcomings of its own¹⁰. Due to the uncertainty surrounding this particular aspect of PPIE

⁹ Note that ʔ is a glottal stop, while ʕ and ʕ^w are pharyngeals. They are presented thus to indicate that they are the so-called 'laryngeal' phonemes of Saussure's Laryngeal Theory, which subsequently coloured the PPIE [e], and giving rise to the later vocalic phonemes of PIE.

¹⁰ For criticism see Watkins (xvi-xvii).

phonology, we have chosen to portray the aspirated stops as unspecified for the distinctive feature of voice, after Schenker (Dawn of Slavic 76). We shall return to the discussion of the aspirated stops below in the Proto-Indo-European section (§4.9).

In addition to the above-listed phonemes, /s/ had a voiced allophone /z/, and the 'non-glottalized stops had aspirated allophones.' (ibid.) The only vocalic phoneme reconstructed for PPIE is /e/, and as mentioned above, quantity was not distinctive.

To reiterate, the typological category to which PPIE belonged initially (Active as opposed to Ergative) does not exert a direct impact on questions pertaining to Slavonic. Two points, however, are indirectly relevant—that at some point a major typological shift occurred, whereby either Active or Ergative PPIE became Nominative-Accusative PIE, and implicit in this, that PPIE lacked the complex verbal and nominal morphology inherited from PIE by the Slavonic languages. Regarding the question of which category PPIE belonged, this matter requires further investigation. Both positions include compelling aspects; on the one hand, if PPIE was in fact ergative, it could provide neat historical correspondences with ancient contacts with the Caucasian language families, as many archaeologists claim. Furthermore, the features of an ergative system are not nearly as different from those of a nominative-accusative system as are those of an active language, like the indigenous American languages cited by Lehmann as examples of this type. On the other hand, the structure of PPIE as an active language and its subsequent change into

nominative-accusative was more thoroughly presented by Lehmann. Recent articles by Nichols ('Diversity and Stability in Language') and Schmalstieg ('An isogloss uniting Baltic, Slavic, Germanic') both add weight to the argument in favour of PPIE as an ergative language. Schmalstieg noted that PIE displayed so-called 'split ergativity', at least in its early phases, where it had hallmarks of both an ergative-absolutive and a nominative accusative syntax. Nichols labelled ergativity as a 'recessive feature' (295), noting that it is rarely preserved over time. Therefore, it is our opinion at the time of writing that the most convincing evidence indicates that PPIE was originally a language with ergative syntax. Lehmann certainly provided a wealth of data, but he does not seem to have interpreted it correctly.

4.4 6th Millennium BCE-5th Millennium BCE: From Pre-Proto-Indo-European to Proto-Indo-European

There is a high probability that the transformation of PPIE into Early PIE was contemporaneous with, or quickly followed the Neolithic Revolution. It is highly unlikely that the two events were merely coincidental. For the purposes of this work, the chain of events can be effectively summarized thus: the language of the hunter-gatherer communities of eastern Anatolia (PPIE) was the ancestor of the language of the earliest agriculturalist communities of Anatolia (Early PIE), and later still of the spreading agriculturalists and pastoral nomadic groups of south-eastern Europe and Central Asia (Late PIE). Therefore, it seems likely that during the period leading up to the Neolithic Revolution punctuation point, the geographical spread of PPIE had not yet outpaced the geographical spread of its speakers. Because the hunter-gatherer

lifeway practiced by the PPIE-speaking tribes did not permit significant population expansion (except under the most abnormal circumstances), it is unlikely that the PPIE-speaking population underwent much increase at this time. Effectively, until well into the Neolithic, the of the speakers PIE were on an equal footing numerically with their neighbours.

From the archaeological evidence surveyed in the previous chapter, we were able to trace the advance of new technology and new populations across the Eurasian landmass. Linguistic evidence indicates that people and ideas were not the only things to emigrate from ancient Anatolian--languages began to spread across the Eurasian landmass from the ancient Near East at this time as well. Just as technology and culture adapted to new environments, and evolved as they assimilated non-native elements, so too with languages. It is these instances of transformation, assimilation, and evolution that are in certain respects more important to the historical linguist than the periods of equilibrium that comprise the bulk of the time span of a language. If we can confidently retrieve evidence from the history of the IE languages that indicates that at some point the language of the hunter-gatherers of eastern Anatolia underwent a profound typological change, whereby the then extant systems of the grammar metamorphosed into systems, which operated on principles entirely opposite to their forebears, then we can be certain that there was an event or series of events in the 'real world', which was more than coincidental.

Although we can now be fairly certain not only of the existence of, but to some extent or another, the shape of, the Pre-Proto-Indo-European language, few of those engaged in the work of reclaiming either PPIE or PIE from beneath ten millennia of linguistic change have spent much time positing why or how this change occurred. This transition from PPIE (ergative or active type) to PIE (nominative-accusative type) is, to the best of our knowledge, absolutely unique in the subsequent history of the IE language family. A typological shift of this sort has not occurred since¹¹ this time within the IE language family. Those explanations for this profound change that have been offered have been tentative, speculative, and largely inadequate. They seem to have relied on the supposed inherent instability of this type of language (ergative or active and isolating), but this is something that is simply not borne out by the evidence.

The numerous examples of languages of both the active and the ergative types, e.g. Amerindian languages Caucasian languages (from both the Northwest and Nakh-Daghestani branches), various African languages, and the indigenous languages of Australia, have, on the whole, shown to be quite typologically stable. We find it quite striking that these two events, i.e. the development and spread of agriculture and the typological shift of the PPIE language from Active or Ergative to Nominative-Accusative, so momentous in their respective spheres of cultural/historical and linguistic development, have not been linked to each other before now. We posit a catalytic relationship between the two events at this stage, i.e. that the development of

¹¹ Although note that certain ergative-type constructions have been borrowed by Indo-Iranian (Lehmann, *Pre-Indo-European* 27), and Advergence scenarios in the Caucasus have resulted in IE languages adopting structural features unique to languages spoken in the region.

agriculture (or, more precisely, the relatively rapid and major demographic increase) was what ultimately facilitated the macromechanical typological change by bringing speakers of PPIE and PIE into contact with more and different speech communities.

4.5 The Significance of the PPIE-PIE Typological Shift

This was anything but a 'chicken and egg' scenario; historical linguistic investigation has revealed the order of the changes, which led from ergative to nominative-accusative, and these fall into a logical progression. It seems that the initial locus of the change was in the phonology of PPIE. Recall the possibility that PPIE lacked 'words' and 'sentences' in the conventional sense (§4.2). This is not to say that PPIE lacked morphology or syntax, merely that it was of a different type. At any rate, under such circumstances, it would seem likely that during the punctuation period which consisted of a rapid demographic expansion concomitant with a linguistic spread, a scenario of shared innovation occurred among the PPIE dialects, differentiating them from their adjacent Proto-Semitic and Proto-Caucasian neighbours. Whether or not this was due to an acquired linguistic substratum is unknown, but the first step in the entire process of typological shift seems to have been the colouring of /e/ due to assimilation of either a preceding or following 'laryngeal' phoneme. This in turn spawned an increased vocalic inventory—one in which distinctions in both quantity and quality were manifested. Changes in the consonantal inventory appear to have occurred after this initial series of events, and indeed, consonantal mutations were often subsequently due to the influence of neighbouring vowels.

4.6 Transitional (Early Proto-Indo-European) Phonetics and Phonology

As noted earlier, as the number of consonantal phonemes decreased, the number of vocalic phonemes increased. Initially, this occurred when the 'laryngeal' phonemes were absorbed into a preceding or following [e] conditioned by stress. The term 'laryngeal' in this context was coined by de Saussure to explain the evolution of the PIE vowels. Traditionally, the laryngeals were transcribed as H₁, H₂, and H₃, but in actual fact, these 'laryngeals' were probably the pharyngeal phonemes /ʔ/, /ʕ/, and /ʕʷ/ (see below, fig. 4.7). Initially, Saussure's Laryngeal Theory met with significant opposition. However, the discovery and deciphering of Hittite in the early 20th century provided irrefutable confirmation of the existence of laryngeals in PIE.¹²

This is, in and of itself, an implicit validation of the notion of a Pre-Proto-Indo-European stratum, because during the PIE period the vocalic system was significantly richer than it had been earlier. Because arguments in favour of the existence of pharyngeal phonemes, and the notion of vowel colouring may seem a bit far-fetched from a traditional IE standpoint, we would remind the reader that both of these phenomena are present in IE's linguistic neighbours, Semitic and the Caucasian families. That both extremely rich consonantal inventories and simultaneously impoverished vocalic one (which display regular vowel colouring) are preserved well

¹² Daniel Abondolo also suggested the inclusion of a fourth laryngeal: ʔʷ (personal communication).

into the present day. In the case of the Semitic languages, they preserve to a greater or lesser extent phonemic inventories containing pharyngeal consonants, in addition to laryngeals and others.

Basing his hypothesis on the higher preponderance of [e] than other vowels in PIE, Saussure proposed the existence of three laryngeal phonemes in the PPIE consonantal inventory, which, when they occurred adjacent to an [e], eventually assimilated to the vowel. Depending on which 'laryngeal' occurred adjacent to the [e], they came to influence the quality and quantity of the [e], thus causing it to manifest as long or short [a], [o], or [u] (see below, fig. 4.7). In addition, some scholars argue for the existence of /ə/, but this matter remains a subject of debate.

ʔe>e	eʔ>ē
f̥e>a	eʃ>ā
ʃ ^w e>o	eʃ ^w >ō

Figure 4.8: the origins of the PIE vocalic inventory

Shields (Indo-European Noun Inflection) argued that the earliest stem markers in IE were -0 , $-N$, and $-r$. The later PIE $-o$ and $-a$ stem classes are probably the most

recent. It is interesting to note that the survivals of the consonant stem type are quite limited in Slavonic; they were '[...] either lost in Proto-Slavonic or transferred to a vocalic class, with or without a derivational suffix [...]' (Schenker, Dawn of Slavic 107)

The enrichment of the vocalic inventory facilitated a second phenomenon, one which had profound effects that are still observable in many present-day IE languages, e.g. Slavonic and Germanic. Ablaut (or vowel gradation, or apophony) is a system whereby a core vowel of a root alternates in one of several ways to indicate certain grammatical distinctions. Lehmann speculated that the rise of ablaut was linked to early PIE stress shifts (Pre-Indo-European 205-206). Gamkrelidze and Ivanov linked ablaut to a dynamic relationship between the structure of the root and the changing phonology of the language; that PIE accent functioned simultaneously with ablaut (166).¹³

Whatever its origin, ablaut manifested itself in two ways: qualitative and/or quantitative alternations. Qualitative ablaut occurred when /e/, which in this instance was the unmarked form indicating nonderived verbal roots, alternated with /o/, most often indicative of derived nominal roots (Schenker, Dawn of Slavic 79). When a short vowel alternated with a long vowel, or no vowel at all, this is termed quantitative ablaut. According to Schenker, '[t]he zero grade of diphthongs consisted in the loss of the vowel and the transfer of its syllabic function to the semivowel,

¹³ Although the actual causality was left unspecified.

sonant, or laryngeal, leading to their vocalization[...]’ (ibid.). Gamkrelidze and Ivanov associated the rise of the zero-grade with a shift of the accent away from the root vowel (131). Schenker also stated that /e/ was the unmarked formant, /a/ the ‘marginal’, /o/ an apophonic variant of /e/, and /i/ and /u/ were variants of diphthongs. Furthermore, long syllabic sonants, i.e. /m̥/, /n̥/, /l̥/, /r̥/, were the results of zero-grade diphthongs extended by a laryngeal (ibid.). Gamkrelidze and Ivanov, having gone into significantly more detail, characterized the rise of ablaut in the following schema

Strong grade	V, where V>/e/, /a/, or /o/
Weak grade	zero grade>0
	reduced grade>ə

Figure 4.9: the rise of PIE ablaut (Gamkrelidze and Ivanov 164)

The issue of chronology is an important one here; because ablaut variants indicate derivatives, it is logical to view the nonderived root as the more archaic. Furthermore, if the o-grade (and subsequently the zero-grade) were marked forms themselves and e-grade was the base-form, then they could not have occurred before the development of laryngeal-coloured vowels unless by analogy to previously-existing root variants. Thus, the laryngeal colouring must have been one of the

earliest developments of PIE, as much of the subsequent complexity of the PIE phonological and morphological systems necessitated the contrasting distribution, which only a larger vocalic inventory could provide.

The following OCS examples typify the e~o~0 ablaut alternations. Note that in all cases later changes in the vocalic inventory obscure the original PIE vowels and diphthongs.

*e	*o	*0
-cvisti ('to bloom')	cvěť ('flower')	-cvьtŏ ('I bloom')
bl'usti ('to watch')	buditi ('to awaken')	bъděti ('to be awake')
-četi ('to begin')	копьсь ('end')	чьnŏ ('I begin')
berŏ ('I take')	sъboгъ ('synod')	bъrati ('to take')
vezŏ ('I transport')	vozъ ('cart')	
grebŏ ('I dig')	groбъ ('grave')	
vedŏ ('I lead')	voždъ ('leader')	

rekq ('I say')	rokъ ('fixed time')	
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Figure 4.10: Some examples of the ablaut alternations in OCS (Schenker, *Dawn of Slavic* 79)

		Stops			Resonants				Fricatives
Labial		p	p ^h	b	m		u/w		
Dental		t	t ^h	d	n	r	l	i/j	s/z
Velar	Plain	k	k ^h	g					
	Palatal	k ^y	k ^y ^h	g ^y					
	Labial	k ^w	k ^{wh}	g ^w					

Figure 4.11: the consonantal inventory of Early PIE

Like the vocalic phonemes, the resonants and liquids displayed quantity and were syllabic. *i/j* and *u/w* are thus transcribed here to indicate that they displayed both syllabic and non-syllabic functions, depending on the phonological environment. In addition to the individual phonemes above, PIE phonology allowed the vowels and resonants to combine, providing for thirty-six diphthongs. /s/ retained its allophone /z/ (Bidwell 9) when it occurred next to voiced obstruents, and the resonants were pitch-bearing at this point, provided they were long. Lastly, scholars have

reconstructed for PIE a system of non-phonemic pitch, which was manifested on long vowels, long resonants and diphthongs.

4.7 Transitional Morphology

In contrast to the pre-inflectional morphology of PPIE, PIE developed a very rich inflectional and derivational morphology: Ablaut phenomena were already mentioned; vowel gradation played a dynamic role in both inflection and derivation. The free particles of the earlier system fused into sets of bound inflectional endings for both verbs and nouns.

Also, new grammatical categories arose as PPIE evolved into PIE. The category of number was common to both nouns and verbs, and nouns were also marked for gender. As with other changes which marked the transition from an active or ergative system to a nominative-accusative one, the rise of grammatical categories, although generalized, did not occur at the same pace nor to the same extent in all areas. This was illustrated in figure 4.2; Adrados posited a 'monothematic' stage between PPIE and PIE, which illustrated the initial regularization of the various PPIE particles into the emerging EPIE inflectional paradigms. Subsequently, further declensional and inflectional paradigms developed, but not in the Anatolian languages. Similarly, Anatolian also lacked the tripartite gender distinction that developed in the 'mainstream' branches of PIE (with the exception of Tocharian

[Shields, Indo-European Noun Inflection 15]), relying instead on a more archaic distinction between 'common' and neuter gender. This seems to represent the intermediate stage between the PPIE distinction of animate v. inanimate and the later PIE masculine v. feminine v. neuter distinction.

In a similar fashion, a fully-fledged distinction of number developed gradually (ibid., 13). On the basis of the PPIE opposition between singular v. non-singular, speakers eventually expanded the non-singular into a subsidiary opposition of dual v. plural for verbs and nouns.

The comparatively rich PIE case system evolved under similar circumstances; as the previously-free particles coalesced into inflectional paradigms, various case endings formed on the semantic bases of the particles. The older system, in which particles indicated animacy/inanimacy, stative/active, etc. developed into a system with an unmarked nominative case supplemented by accusative (direct object), genitive (possession), dative (indirect object), instrumental (means), locative, partitive, and ablative. Of these, the so-called oblique cases, i.e. dative, instrumental, etc., were probably younger formations.

The various declensional paradigms were regularized in like fashion. As mentioned above, the consonant-stem declensions were most likely the earliest to emerge. Semantically speaking, these included several very important groups of

words. The suffix *-ter seems to have designated kinship terminology from a very early stage. 'Father', 'mother', 'brother', and 'daughter' all belong to this type. The reconstructed forms are **pátér*, **māter*, **b^hrāter*, **d^hug^h(ə)ter* (Buck, 103-107). The PIE term for 'son' (**seuə-* [ibid.]) did not correspond to this pattern, but as Lehmann speculated, '[...] the position of the son may have seemed independent, rather than determined by relationship to other members of the family.' (Pre-Indo-European 225)

Other groups of words that were present in PPIE include generic, pre-thematic terms for various types of domesticated animals and livestock including dogs, cattle, goats, pigs and sheep (ibid. 228), and the verb 'milk' **melg-*. Importantly, several kinds of objects or activities were notable by their absence from PPIE. Terminology relating to pottery, archery, fishing, and agriculture all tends to be thematic¹⁴, or represented by different words in the different branches of IE, which indicates that these activities were adopted as or after PIE linguistic unity began to disintegrate. Therefore, it is highly unlikely that the PIE speakers can be identified exclusively with the Kurgan culture detailed by Marija Gimbutas and her colleagues. The Kurgan culture, as discussed above (§3.4), was a pastoralist/nomadic culture. Although it is likely that the Kurgan peoples were speakers of an IE dialect or language, it is unlikely that they represent the PIE community *in toto*, as the terminology in PIE relating to vehicular transportation was thematic as well. Because PPIE arose in the pre-agricultural Neolithic era, PIE was definitely a language of agriculturalists—all of the main sets of etyma dealing with agriculture or complex animal husbandry in the PIE lexicon are thematic—and therefore not the language of the Kurgan culture: a later, pastoralist-nomadic, IE-speaking offshoot.

¹⁴ And are often instances of taboo replacement (Daniel Abondolo, personal communication).

4.8 Transitional Lexicon

Turning finally to the lexicon, it was most likely significantly enlarged during this transitional period for several reasons. We can view these reasons from both a linguistic and a cultural viewpoint. The first factor that facilitated an increased lexicon was the enhanced capacity for derivational morphological processes. The second reason was the acceleration in cultural and linguistic contacts caused by the ever-increasing population. As the PIE speakers increased in numbers (not necessarily at the expense of their neighbours, at least immediately), expanding into new territories, the number of potential contact scenarios grew proportionately. Note, however, that prestige factors played an important role in such instances of contact. PIE, which was a vehicle of an agriculturalist economy into areas where the traditional lifeways were of the hunter-gatherer type, was probably less receptive to loanwords (other than onomastic terminology), relatively speaking. Nevertheless, the substratum effect cannot be completely discounted under these circumstances, as the instances of demographic expansion were probably less pervasive than instances of linguistic expansion. Finally, the PPIE to PIE transition would seem to indicate a punctuation period of the divergence type (cf. Anatolian v. the mainstream), which was followed by a period of consolidation (equilibrium), at least in the Balkans, which in turn was followed by another period of expansion (see §3.4 above).

The effect of the demographic expansion quickly manifested itself in the language; specifically in the establishment of several dialect areas. These dialect areas were characterized both by shared retentions and shared innovations on all levels of the grammar and lexicon.

To reiterate, the two most significant phonetic events marking the transition from PPIE to PIE were inter-related—the rise of a vocalic inventory containing qualitative and quantitative distinctions, and the concomitant loss of the ‘laryngeal’ consonants. This in turn facilitated the crystallization of a fully-fledged case system and declensional paradigms, which ultimately resulted in the typological shift to a nominative-accusative typology. As intimated earlier in this section, the political situation that speakers of PPIE found themselves in, i.e. increasing population followed by increased political instability, fostered the assimilation of co-territorial non-PPIE speakers, which triggered a substratum effect, thereby introducing new elements into the grammar and lexicon of PPIE. This, combined with widespread political unrest in ‘Old Europe’, caused a temporary state of equilibrium within the PPIE speech community.

4.9 5th Millennium BCE-3rd Millennium BCE: Proto-Indo-European

In the preceding section we provided a brief outline of the main changes that signalled the demise of Pre-Proto-Indo-European, or more accurately the

transformation of PPIE into Proto-Indo-European. It seems that all dialects concerned underwent the profound typological shift described earlier, though some to a greater and some to a lesser extent. We wish to re-emphasize at this point the important distinction that must be remembered between shared innovation and shared retention. The development of nominative-accusative syntax seems to be an innovation shared by the entire speech community, while the more archaic gender system seems to be a retention shared by the Anatolian languages. The remainder of the history of PIE will be couched in these terms—certain branches of the PIE continuum shared innovations with each other that were not shared by other branches. That a certain group of dialects shared an innovation did not necessarily mitigate against their borrowing distinctive elements from other branches, as we shall see below in the area of the lexicon. Despite a high degree of linguistic cohesiveness (due, no doubt, in part to the low population density of many of the areas into which PIE spread, either by way of outright migration, or gradual demic/linguistic diffusion), from the outset it was rather a varied group of dialects that had more in common with each other than with any of their neighbours. Advergence processes are every bit as important here as divergence ones, as are prestige factors which explain relative immunity, manifested as equilibrium.

In addition to spatial variation, PIE can be divided into distinct chronological strata, designated by increasing degrees of dialectal differentiation, and corresponding neatly with archaeological evidence. We follow the conventional terminology in this case, by designating the periods Early and Late Proto-Indo-European. Early PIE dialects were most likely spoken between during the Early-Mid Bronze Age (5th-3rd

millennia BCE). Subsequent to this, one can refer to the Late PIE period, where the various IE dialects began to rapidly diverge to a greater and greater extent.

The evidence modern researchers have at their disposal indicates that PIE was an inflecting language, with a basic inflectional distinction between nouns and verbs. The verbs would seem to have ultimately been derived from the nouns, and in the initial absence of a fully-developed tense or aspect system, time was expressed by means of *Aktionsart*, in which completion or duration of the action denoted by the verb was expressed in the meaning of the root itself. By the Late PIE period (2nd millennium BCE), verbal morphology had become rather more complex, and verbal aspect had become established as the means by which completion or duration was expressed. Furthermore, there was a binary opposition present from the earliest times between two diatheses: reflexive and non-reflexive. There was also a distinction between the active and middle voices, and four distinct verbal moods. Three innovations in tense had occurred by the Late PIE period: a future tense, an imperfect, and a pluperfect.

Nominals, in general, could be catalogued under one of four different headings: substantives, adjectives, pronouns, or numerals. PIE nominal morphology was relatively rich, which is one reason that researchers suspect that Early PIE verbs were denominal. Initially, the case system consisted of nominative, accusative, genitive, dative, instrumental, locative, and ablative, with a pseudo-case, the vocative.

By the end of the Bronze Age, the ablative had syncretized with the genitive, resulting in a six-case system.

As one progresses from the Early PIE period further forward in time into the Middle Bronze Age, the number of changes that took place gradually increases in number and intensity. It was at this time that one of the more well-preserved splits in the PIE community began to take shape: the *centum-satem* isogloss.

This 'kentum' treatment of PIE palato-velars is not isolated in Slavonic. I think that it is best interpreted by admitting prehistoric 'kentum' borrowings into Slavonic, which means that in our case we should start from a dialectal 'kentum' form *k^helo-uoikós borrowed by the Proto-Slavs as *čelověkь*. (Gołab, 'Slavic *čelověkь* 'homo' against the Background of Proto-Slavic Terminology' 191)

In addition to *čelověkь*, Gołab gives the following as examples of centum forms in Slavonic: **čerda* (< **kerd^hā*) 'row, herd', *kopyto* 'hoof', **korva* 'cow', **korvajь* 'ritual wedding cake', *komonь* and *konь* 'horse', *kotiti se* 'Junge werfen', *kotora* 'fight', *krotiti* 'tame', **kьrdo* 'flock', **kьrmyь*/**kьрма* 'food, forage', **kьrmiti* 'feed', and **kьrvь* 'ox'. (ibid. 191-192)

Long thought to represent an east-west isogloss, this view was abandoned upon the discovery of Tocharian in western China, which is a 'centum' language. While some scholars began to consider *satem* to represent the centre, while *centum*

represents the periphery, (noting also that no other PIE isoglosses coincide geographically with *centum-satem* [Birnbaum 16]), there is a still more recent view.

The old view that *centum* is western and *satem* is eastern can be replaced by the (perhaps also over-simplified) position that *centum* is early (from Archaic PIE and its contemporaries of Phase I) and *satem* is late (derived from the Balkan Proto-Indo-European of phase II). (Renfrew 'Time Depth' 275.)

Though dialectal divisions do not, in and of themselves, constitute a cause of language change, they may be viewed as a product of it, due either to contact or to shift. Essentially, in the former group of dialects, the plain and palatalized velar stops coalesced in the Germanic, Celtic, Italic, Hellenic, Anatolian and Tocharian families. Slavonic, like Indic, Iranian, Armenian, Albanian and Baltic, is a *satem* language, meaning that the labial and plain velar stops merged, and the palatalized velars were spirantised, thus $k^y > š$, and $g^y > ž$. Further developments to these phonemes occurred in each of the various language families. In Slavonic, $š > s$, and $ž > z$. The reflexes in Baltic were different; $š$ was retained in Lithuanian, e.g. *šimtas*, but in other Baltic languages it mirrored Slavonic, changing to s , e.g. Latvian *simts* (Press, personal communication, Schenker Dawn of Slavic, 80). The name of this isogloss comes from the words for 'hundred' in Latin and Avestan. All examples in the following table are taken from Buck, unless otherwise noted.

PIE	*krew-, *kru-	*g'no-
OCS	крѣвь ('blood')	знати ('know')
Lith.	kraujas	žinoti
Lat.	cruor ('gore')	cognōscere
Skt.	kravis- ('raw flesh'), krūra- (('raw'))	jñā
Av.	xrū- ('raw flesh') xrūra- ('raw')	zan-
Goth.	n/a	kunnan
OE	hrēaw ('raw')	cunnan, gecnāwan
Gk.	κρέας ('raw meat')	γινώσκω
Hitt.	kurur (('hostile')) ¹⁵	n/a

¹⁵ See Sturtevant (119) for further explanation of the etymology of this item.

Toch.	n/a	knā- (A and B)
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Figure 4.12

As opposed to the loss of aspiration (which was not as widespread as *centum-satem*), the spirantization of /k'/ and /g'/ was a much more significant micromechanical change in the language: this was not simply an instance of suppression of a secondary articulation (a minor subtractive change), but an instance of the quality of the phoneme altering. In terms of distinctive articulatory features, [k']=[+stop, +velar, -voice], with a secondary articulation of [+palatalized]. [g'] is the same, except that it is specified for [+voice]. The reflexes of the change, however, are [š]=[+continuant, +palatal, +fricative, +spirant, -voice], and for [ž], the distinctive features are the same except that it is specified [-voice]. Thus, not only is the secondary articulation lost, as in the previous merger of aspirated and plain stops, the acoustics of the phone are altered entirely; an occlusive becomes a continuant, the position of the bulk of the tongue is shifted forward in the oral cavity, and the only commonality retained is the matched specifications for voicing or lack thereof. Whether or not this obliterated mutual intelligibility between speakers of central and peripheral dialects is unknowable. Certainly communication would have become increasingly difficult as generations passed, if there was much communication at all by this point. The expansion of PIE-speaking tribes by this point was quite possibly such that some sort of dialect continuum was emerging, much as in modern times, but at a much slower pace as dictated by the relatively low level of technological advancement and mobility of the general population.

In Greek and Latin the tripartite opposition remained and these stops either manifested themselves as [-voice], or were subject to subsequent, daughter-language-specific sound changes (Schenker, Dawn of Slavic 76). In languages where this did not occur, e.g. Baltic and Slavonic, the voiced stops merged with the aspirated ones. For example, OCS *berq* (<*b^her- [Buck 707]) and *bol'e* (<*b, *bel, cf. Skt. *balin-*, 'strong' [ibid. 295]), *dymь* (<*d^hūmo- [ibid., 73.]) and *dati* (<*dō- [ibid., 749.]), *gostь* (<*g^hosti- [ibid., 1350.]) and *qngьlvь* (<*ang- [ibid. 900]) (all OCS examples, Renfrew, op. cit., 80). This evidence provides the basis for positing a series of changes in PIE that marked the end of linguistic unity. Note that although from the phonetic point of view, this might not seem like a particularly cataclysmic change, the coalescence of plain and aspirated stops was a major phonological event, potentially introducing pernicious homophony, although note the different reflexes of the original PIE /e/ (see next paragraph), e.g. *bel ('strong', > Skt. *balin-*, OCS *bol'e* Rus *bol'soj*, Lat. *dēbilis*, etc.) vs. *b^hel ('to shine, flash, burn, shining white...' ¹⁶, > OCS *bělь*, Rus. *belyj*, Lith. *baltas*, Grk. φαλός, Eng. *bleach*, etc.). (Watkins 9; Buck 1054; cf. Schenker, Dawn of Slavic 157, who listed the PIE root as *b^hail-).

4.10 Proto-Indo-European Morphology

For PIE, the most salient features of the morphology were the development of the primary morphosyntactic distinction between verbs and nouns. Specific to the

¹⁶ This is the primary meaning of this root, and the only one seemingly attested in Slavonic. The secondary, tertiary and quaternary meanings of the root are 'to blow or to swell', 'to thrive or to bloom', and 'to cry out or yell.' (Watkins 9-10)

morphosyntactic class of nouns were productive affixation and infixation, syncretism within the system of seven cases, specification for three numbers and three genders, and adjective gradation. Particular to the verbs were the contrast between two diatheses, two voices, four moods, three tenses, and the development of a two more tenses, a fifth mood, and the ongoing distinction between two persons.

The ultimate morphological distinction in PIE was between uninflected and inflected units. Adverbs were uninflected, while nouns and verbs, being inflected, were morphologically complex, consisting at least of a root and various formants, each of which encoded various types of grammatical information. Furthermore, the initial distinction between nouns and verbs developed into a full-scale opposition. Under the heading of nominals fall several different classes of words: substantives, adjectives, pronouns and numerals. Each of these categories was marked for gender, number, and case.

Gamkrelidze and Ivanov (345) gave a list of twenty-five morphological isoglosses, of which the following twelve were shared by Slavonic with various other members of IE. They were feminines in **-ā*, **-ī*, **-ū*, genitive singular in **-ō*, oblique cases in **-m-*, masculine plural instrumental in **-ōis*, locative **-s-u/*-s-i*, genitive-locative dual **-os*, 1st person singular personal pronoun in **-em*, independent demonstrative pronoun **so*, **sā*, **t^ho/pl.* **t^h-*, **yos*, middle in **-oi/*-moi*, modal forms in **-l-*, and middle present participle in **-mo-*. When these data are correlated to the figure 4.5, the picture that emerges is one slightly more complex than indicated by

that diagram. From these examples, it is safe to say that morphologically speaking, the groups that bear the strongest similarities to Slavonic are Baltic, Indo-Iranian, and Germanic. These groups share the highest number of innovations and retentions with each other. This should not come as any surprise, given the geographical proximity of these groups to each other, even into the present day. Anatolian is something of a special case; due to the early obsolescence of the IE languages of Asia Minor, relative to the other IE dialects, there was little in the way of morphological (or phonological) innovation. Slavonic (and its sister dialects) retained certain archaic elements, e.g. the modal formant **-l-*, an instance of a shared retention among these dialects.

It has been pointed out that lexical isoglosses within the PIE speech area were more complex than phonological or morphological isoglosses; here the situation was more intricate than the Anatolia v. Old Europe scenario of grammatical isoglosses. This is one basis of the argument in favour of the lexicon as one of the two main 'entry points' for linguistic change. In this instance, a high degree of lexical borrowing, higher (relatively speaking) than the degree of grammatical change, might be an index of a 'top-down' scenario—one in which the intrusive language is spoken by a greater number of people than the aboriginal one(s). Under such circumstances, it could be argued that there would have been no significant substrate to speak of, except perhaps in isolated enclaves; therefore no significant number of foreign phonemes and morphological or syntactic would remain largely unchanged (due to a lack of large numbers of non-native adult speakers attempting to assimilate the rules and structures of an entirely new language). However, local toponyms, and lexemes

denoting local flora, fauna, etc. would be adopted by the speakers of the encroaching language.

That being said, the general pattern already detailed, whereby the dialects ancestral to Slavonic, Baltic, and Indo-Iranian (and to a lesser extent, Germanic) continued to bear closer resemblance to each other than their more geographically distant IE sister dialects, remained valid. As Gamkrelidze and Ivanov (365) noted,

It is relatively easy to discern, on lexical evidence, closely interacting areas of *satem* languages which coincide with the Armenian-Indo-Iranian and Balto-Slavonic areas...established on phonological criteria. There are a number of lexical forms characteristic of only these groups of dialects[...]

Sanskrit	Lithuanian	OCS
śyāvā-	šývas	сивѣ
kr̥ṣṇā-		чрънѣ
māra-		морѣ
tucchyā-	tùščias	тъштѣ

ati-réka-	ātlaikas	отъ-лѣкъ
dakṣiṇá-	dēšinas	desnъ
ajá-	ožýs	(j)azno

Figure 4.13: Phonological similarities between Indo-Iranian, Baltic and Slavonic

Within the PIE area, there were numerous lexical isoglosses that attested to the early heterogeneity of the PIE speech community, beyond the initial Balkan-Anatolian division. From the historical standpoint, this indicates both that the initial punctuation event, which triggered the spread of PIE out of Anatolia into the Balkans, continued to operate throughout this period. In other words, the agricultural economy spread throughout Eurasia to its maximum, and as the new lifeway spread, the spreading population accompanied it, as did their languages. It must be remembered, though, that this process took several millennia, and although there was much in common (at least initially) linguistically and culturally among the different communities, unique local factors (climate, terrain, etc.) had a distinctive effect on each community. The second point worth emphasizing is that the numerous lexical, phonological, and morphological isoglosses are indicators not only of higher or lower degrees of shared retention, but also of shared innovation, i.e. that to some extent or another, contacts were maintained.

It is this complex and often amorphous series of overlapping connections between adjacent regions of the PIE area that played such a major role in the determination of the future shape of the languages. In addition, as we move closer and closer to the present day, increasingly rapid and profound innovations in lifeways, culture, and technology enabled the cementing of these ancient networks of communication. Thus, when a punctuation event did occur, e.g. several years of bad harvest or a plague, the enhanced technological and martial capabilities of the groups undergoing the punctuation exerted a more profound and/or widespread impact on their neighbours. Furthermore, because the agricultural economy enabled both an increased sedentary population with swelling social stratification, as well as the nomadic-pastoralist economy, the relations between different speech communities became ever more dynamic.

Beginning in this Late PIE period, the above-mentioned dynamic rapidly became the leitmotiv of the relationship between the tribes occupying the north-eastern extreme of the PIE area and their neighbours to the east, west and south. Due to the intricacies that the environment and climate of north-western Eurasia imposed upon the practice of an agricultural economy, the northernmost extremity of this vector of the PIE spread corresponded to the northernmost extremity of this phase of the spread of farming. Although there were numerous punctuation events affecting the Balto-Slavonic and Common Slavonic speech communities, because of the relative seclusion of these groups, such episodes were comparatively infrequent. Also, the periods of linguistic equilibrium tended to be longer. This resulted in the

well-attested conservatism of the Baltic and Slavonic languages, which is the subject of the next section.

4.11 3000-2000 BCE: Balto-Slavonic

If historical events are viewed in a certain way, there is much evidence that links the disintegration of PIE unity, or more accurately, the collapse of the PIE dialect continuum, with the decrease in demographic and political stability, which marked the third and second millennia BCE. When discussing the IE languages of north-eastern Europe, the term 'Balto-Slavonic' is used to denote the period of shared development between the dialects ancestral to the Baltic and Slavonic language families. Despite many years of heated debate as to whether a 'Balto-Slavic' language ever actually existed, there has been growing consensus that this was probably the case. For one thing, there was a high number of grammatical and lexical retentions and innovations shared only by Slavonic and Baltic, in addition to a well-documented cultural similarity between the IE-speaking communities of northern Europe.

[The] earliest lexical correspondences between Baltic, Slavonic and Germanic denote a close relationship in the activities of daily life and mirror an essentially pre-metallic civilization using wooden implements. (Polomé, 'Isoglosses and the Reconstruction of the IE Dialectal Split' 297)

Friedrich also noted that Slavic and Baltic (and to a lesser extent Germanic) shared a high amount of arboreal nomenclature (24-26). These linguistic and cultural correspondences led pioneers in the field of comparative IE linguistics to posit a

Balto-Slavonic stage (proponents of which included Rozwadowski, Meillet, Lehr-Splawiński, and Mayer).

More recent research by investigators such as Henrik Birnbaum, Henning Andersen and Oleg Poljakov, to name but three, have added both further weight to the evidence in favour of a period of BSI linguistic unity, as well as increased the precision of our understanding of the relationship between the early dialects. Their view is based on the fact that, upon closer investigation, Slavonic shared a different relationship to the East Baltic languages than it did to the West Baltic languages. Birnbaum (Common Slavonic 19-20) noted that some features of Balto-Slavonic are shared only with parts of Baltic. Poljakov asserted that

[...] das Balto-Slavische vom Anfang an in drei Dialekte gegliedert war: das Ostbaltische, das Westbaltische, und das Urslavische. Diese Auffassung scheint richtiger im Vergleich zu den Hypothesen dieser Reihe, weil sie mehr die sprachlichen Beziehungen zwischen dem Urslavischen und Westbaltischen einerseits und dem Urslavischen und Ostbaltischen andererseits in Rechnung stellt. (20)

Andersen carried this one step further, stating that

They [i.e., East Baltic and West Baltic] should be understood rather as the only surviving, originally not directly contiguous, fragments of a former Slavonic-Baltic continuum, which came into being perhaps in the second millennium before our era, when Indo-European speakers first established continuous linguistic traditions in the vast spaces of Eastern Europe.

64)

Andersen's point is well-taken, despite the fact that his assessment of the chronology of PIE spread is at variance with our own.

It must be remembered that, from the traditional point of view, one of the obstacles inherent in the acceptance of the Demic Diffusion model of the spread of PIE is the significantly increased time depth that the investigator is required to explain. However, when the Punctuated Equilibrium model is invoked, this seeming obstacle disappears. As will be examined below, the Balto-Slavonic period was one not characterized by as much macromechanical change as either earlier or later periods. True, several significant phonological and morphological changes did occur, however these were not on the same scale as those which occurred either prior to the Balto-Slavonic period, or after it.

Also, several of the phonological and morphological changes were common to the Baltic, Slavonic, and/or Germanic and Indo-Iranian. It must be emphasized that although the processes of change themselves were similar or identical, the reflexes were not. This is one indicator that convergence and advergence processes were at work. This, in turn, is one of the hallmarks of a period of linguistic equilibrium. Polomé noted the cultural parallels between Germanic, Baltic, and Slavonic; add to

this parallels in the realm of linguistic evolution and the results are, we believe, anything but coincidental, or the product of some mysterious teleological proclivity.

The complexities of the relationship between East Baltic, West Baltic, and Proto-Slavonic lie properly in the scope of a work specializing in that topic, but hopefully will provide valuable insight into the workings of these processes.

4.12 Balto-Slavonic Phonetics and Phonology

By this point, the Balto-Slavonic languages had already had enough common evolution to show significant phonological, morphological, syntactic and lexical similarities. Under the phonological heading, both groups shared the following features: vocalic resonants, phonemic pitch, /s/ retroflexion, and the merger of /o/ and /a/.

	Stops		Resonants ¹⁷				Fricatives	
Labial	p	b	m		w			
Dental	t	d	n	r	l	j	s	z

¹⁷ Each of the resonant phonemes of Balto-Slavonic had syllabic and non-syllabic variants.

Velar	k	g		x
Palato-velar				š ž

Figure 4.14: the consonantal inventory of Balto-Slavonic

The next phonological process which had an important effect on Balto-Slavonic was one that was shared by the ancestral Baltic and Indo-Iranian languages as well. This was the retroflexion of /s/, often known as the 'RUKI rule'. The reason for this nickname is that in Balto-Slavonic, the LPIE phoneme /s/ began to be realized either as /x/ or /š/, depending on position. Basically, if /s/ was preceded by /i/, /u/, /r/ (syllabic and non-syllabic variants), or /k/, and followed by a vowel or sonant, it came to be realized either as /š/ if it occurred before a front vowel or sonant, or /x/ in any other environment. Shevelov (127-129) argued that the /x/ reflex of the /s/ retroflexion was secondary; the process originally was /s/ > /s' / > /x/ preceding vowels and sonants, and only later /x/ > /š/ due to the First Velar Palatalization (see below). Also, Schenker (*Dawn of Slavic*, 81) drew attention to the fact that the RUKI rule did not affect /s/ that had issued from the spirantization of /k'/, indicating that this process happened before /š/ or /ž/ had changed to /s/ or /z/ in the *satem* languages. One relatively immediate effect that this change had was to bring /š/ and /x/ into contrasting distribution.

PIE	OCS
nōk'-ěj-sī ('you carry')	nosiši
ōus-ī ('ears')	uši
pēr-sīd-l-ā ('passed' fem. result. part.)	prěšyla
rēk-s-ŋt ('they said' aor.)	rěšę
ōrb ^h -ō-j-sū ('servants' loc. pl.)	raběxъ
ōus-ō-s ('ear')	uxo
pēr-sōd-ī-těj ('to pass')	prěxoditi
rēk-s-ō-m ('I said')	rěxъ

Figure 4.15: Slavonic reflexes of the RUKI rule (Schenker, Dawn of Slavic 81)

As mentioned above, the RUKI rule operated not only in Balto-Slavonic, but in the Indo-Iranian and Baltic speech areas as well. The reason that we have included it in the Balto-Slavonic inventory of changes is that the results were different in each area, which may indicate, among other things, that although the change was an innovation shared among these three post-PIE dialects, other processes were at work, which prevented the change from producing identical results in each area. In other words, it is identical or near-identical results of a change that must be sought to

validate any claim of a period of common evolution above and beyond dialectal differentiation. Another way of viewing this might be that this individual change originated in one speech area, and spread outwards to the other two. Whichever might have been the case, the dissimilar results of the retroflexion of /s/ are the criteria for including this change as part of the post-PIE histories of these three language families, rather than as part of the pre-fragmentation histories. See Schenker (Dawn of Slavic, 'Proto-Slavonic'), Shevelov, Andersen ('Historical Dialects') for more discussion of the retroflexion of /s/.

Another major phonological event of the Balto-Slavonic epoch was the merger of /o/ and /a/. Like RUKI, this is another instance of an identical process affecting different language families with different results. The classification of such processes as these for the sake of a phylogenetic approach to language change is complicated; is this an instance of an isolated change having been actuated in a certain region, and being propagated across a wide region? Is it rather a case of a 'slow starter', i.e. a change which was initiated during a period of common development, which lay relatively dormant over the course of centuries, only to emerge within each group as other changes 'pushed' and 'pulled' their way throughout the phonology? Or was it something more akin to Andersen's description of the 'parasitic "r"' found throughout Romance and Germanic dialects (*ibid.*), which it was argued was the result of latent tendencies in the structure of the various languages, remarkable in their similarity of origin, but entirely coincidental in their likeness in realization? The fact that Slavonic, Indo-Iranian, and Germanic had similar things occur in their vocalic

inventories, when the three families shared so much else in common, is unlikely to be accidental.

4.13 Balto-Slavonic Morphology and Syntax

As with the phonology, the lack of significant amounts of change in the morphology indicates that the Balto-Slavonic period was one of linguistic convergence. Many of the morphological categories, processes, and features remained largely intact during this period.

Beginning with the class of nouns, much as with the phonological 'consolidation' examined in the preceding section, there was some degree of case syncretism. The old PIE ablative case merged with the genitive in the singular. Syncretism was more widespread in the dual, which only inflected for three cases: nominative/accusative, genitive/locative, and dative instrumental. Regarding the dative and instrumental, it is interesting to note that in the Germanic, Baltic and Slavonic languages, the formant for these inflections was the suffix *-m*; most other IE languages used the formant *-b^h* for the oblique inflections. Finally, it was during this period that adjectives became marked for specificity: definite vs. indefinite.

Concerning the verbal class, there was very little activity. The PIE diathetical distinction active vs. middle was maintained, as was in large part the fourfold

distinction in verbal mood: indicative, subjunctive, optative and imperative. Due mainly to the inherent semantic makeup, i.e. the expression of conditional or other actions *irrealis*, the subjunctive began to be reinterpreted as a future tense. Similarly, the PIE optative supplanted the more archaic imperative. Regarding verb tense generally, the Late PIE threefold distinction remained present: aorist: perfect, with the emphasis rather on the manner of completion of the action described, than on the temporal characteristics of the action.

To summarize, the Balto-Slavonic period was, relatively speaking, rather uneventful, both historically and linguistically. The most significant change in terms of the overall effects on the language seems to have been restricted to the phonology: the retroflexion of /s/. It would be misleading, though, to consider this period unimportant relative to the other periods in the history of the Slavonic languages. Quite the opposite is true. All else being equal, when the archaeological record indicates a relative absence of political upheaval and environmental factors constrain demographic expansion, we may safely assume a period of linguistic equilibrium. As noted in Chapter 2, the hallmarks of an equilibrium period are widespread advergence and convergence. This is precisely what the reconstructed linguistic evidence points to. In this region, the adjacent IE languages underwent similar phonological and morphological/morphosyntactic processes, albeit with different results in each area. The consolidation of the vocalic inventories of Baltic, Slavonic, and Germanic (as well as Indo-Iranian), the retroflexion of /s/, and limited case syncretism can be viewed from this perspective as shared innovations operating across a (temporary) linguistic area (in the technical sense of the term). If, like Lunt (181-182), one

attempts to analyze the Balto-Slavonic period on purely linguistic grounds, presuming a teleological view of language change, then the results are sure to be unsatisfactory. This method of inquiry yields a gap of several centuries of inexplicably retarded linguistic development, which flies in the face of theories of language change relying primarily or solely on micromechanical factors. To explain this unsightly vacuum away, one is required either to dismiss it as an exception to the rules of drift and shift, and/or to revert to a conventional assessment of the history of the IE languages—an assessment that relies heavily on assumptions of large-scale, rapid ethnic migrations that are simply not borne out by a balanced, objective examination of the evidence available. This is not said either to deny the occurrence of tribal migrations, or to discount their effects on languages in general. We are simply noting that such migrations as did occur during the Balto-Slavonic period had an insignificant or indirect effect on the language. It is during the next period of the history of Slavonic that migrations resumed a central role (along with other external forces) in the evolution of this branch of IE.

4.14 2000 BCE-1000 CE: Proto-Slavonic and Common Slavonic

At this point, we commence a description and analysis of the last phases of the evolution of the Slavonic branch of the Indo-European language family before the rise of the individual Slavonic languages. It is for the Proto-Slavonic (PSI) and Common Slavonic (CSI) phases that we possess the largest amount of reliable reconstructed and documented data. It was during this period that the Slavonic languages began to be documented, first by their neighbours, and with the introduction of literacy via the

Old Church Slavonic language of Ss. Constantine-Cyril and Methodius, by the Slavs themselves.

The grouping of the initial and secondary phases of the evolution of a distinctly Slavonic group of dialects under one heading should be viewed as a device of expediency, rather than a reflection of any theoretical predilections. It is also important to remember that the terms 'Balto-Slavonic', 'Proto-Slavonic', and 'Common Slavonic' are largely abstractions; we have chosen to use these terms primarily as chronological indices. Andersen, we believe, was quite right to refer to such entities as 'quasi-languages' ('Prehistorical Dialects' 184), i.e. entities that had no demonstrable existence as such in the real world.

There are other significant benefits to shifting the referents of these terms from specific 'languages' to phases of development. For one thing, the bases for the divisions between each distinct or semi-distinct phase have shifted from changes in the grammatical structure of the language to significant stages in the history of the *speakers* of the language(s). Historical events and periods would seem to make obvious reference points, as they are much more easy to verify, both in terms of the nature of the event and the duration. Due to the extremely high degree of diversity possible even in one spatially-defined speech community, e.g. a city, the ability to 'pin down' a single linguistic change (let alone a matrix of changes following rapidly one after the other, i.e. a punctuation period) so far back in time is a daunting task indeed.

This remains the case regardless of which subsystem of the language one chooses to use as reference for any sort of chronological exercise, from the phonology to the lexicon. Without reference to external events, there is simply no way to gauge the antiquity of any element or combination of elements of a language. A prime example of this difficulty is Glottochronology and Lexicostatistics. These methods have been effectively debunked; their uselessness is due in no small part to the fact that verification from comparison to external events comes as an afterthought. The unpredictable ebb and flow of periods of punctuation and equilibrium were not static, stable, or generalized.

These are precisely the issues that any investigator faces when attempting to examine the history of IE in general, and Slavonic specifically. The fact that there is a greater scope for exploration into the causes of the fragmentation of Common Slavonic than into the evolution from Balto-Slavonic into Proto-Slavonic should not come as much of a surprise; because there is more evidence available, a higher degree of refinement is available as well. This is another reason why we have chosen to use chronological indices rather than linguistic ones—discussion of the Pre- or Proto-Slavonic period carries implicit with it an awareness of potential for a large amount of dialectal diversity. Traditional discussions of the Balto-Slavonic or Proto-Slavonic language, however, imply a high degree of homogeneity within the speech community that probably did not exist. Naturally, there is also a degree of geographical specificity implied in discussions of the Pre-, Proto-, or Common Slavonic periods; this is an attempt to overtly recognize that those peoples speaking the dialects of the period under question were distinguished from their Germanic-,

Finnic-, or Baltic-speaking neighbours by their language, if by nothing else. Great care must be taken in the use of this terminology as well. It is not meant to distract from the fact that often, members of different linguistic traditions or speech communities lived in close proximity to each other, and that bi- or multilingualism was possibly quite widespread.

With these caveats in mind, we proceed to an examination of the Proto- and Common Slavonic linguistic milieus. Here we are required to tread very carefully; it was beginning in this period that the Slavonic tribes intensified their contacts with the wider world, a scenario which would ultimately lead to the dissolution of their ancient linguistic and cultural 'unity'. Gołab argued that a factor in the hastening of the linguistic fragmentation of Eastern Europe was '[...] probably a foreign ethno-linguistic substratum' ('The Ethnogenesis of the Slavs' 132): Proto-Finnic in the case of Baltic and other IE languages, e.g. Armenian or Indo-Iranian in the case of Slavonic. The task is complex and delicate, especially at this stage, when different influences were acting upon different segments of the Slavonic continuum. Linguistic changes did not necessarily affect the entire continuum, and if they did, they did not necessarily affect all areas in the same way. While it is true that, especially during the Proto-Slavonic period, the vast majority of changes had the same or similar effects on all sections of the Slavonic linguistic continuum, there were notable exceptions. Furthermore, as the Slavs were drawn into the orbit of their sedentary, more 'civilized' neighbours with other ethnic and linguistic groups, the speed, quantity, and intensity of linguistic changes increased dramatically.

We follow the same basic format as in previous sections for the description and analysis of PSI and CSI. The questions are relatively simple: who are the people in question? What were the salient features of their culture, specifically those which had a demonstrable or likely effect on their language(s)? What is the timeframe under question? How closely do the historical events, which affected this group of people, correspond chronologically and spatially with the changes in their language(s), such that a significant and relevant historical event can be said to have been in a catalytic relationship to the corresponding linguistic change(s)? By what means were the changes that the language(s) underwent effected? Was the initial locus of the change grammatical, e.g. a new phoneme or phonological process introduced, or did the change originate in the lexicon, and thence spread to the other subsystems of the grammar? Finally, what was the ultimate significance of a particular evolutionary episode? Is it evidence for heretofore unsuspected, or poorly-investigated contacts between two or more groups?

Our initial proposition is that although the PSI and CSI periods were both comparatively long, they constituted one extended punctuation period. More precisely, the PSI and CSI periods were marked by numerous regional and local punctuation events of varying type and force that were, relatively speaking, so close together that they may safely be regarded as individual episodes in one extended period of change. The starting point for this proposition was Lehr-Spławiński's salient observation that the prehistoric Slavonic languages seemed to have undergone two phases of evolution immediately prior to their dissolution, the first 'longer and slower', and the second 'more dynamic' (Birnbaum, Common Slavonic 222)

Therefore, he deduced, CSI was probably a much more dynamic language than some of his predecessors may have supposed.

Obviously, this meshes quite well with our own view of the evolution from PIE to BSl. and thence to PSI and CSI, whereby the majority of the time from the disintegration of PIE until the accelerated period of change beginning in the PSI epoch. What remains to be demonstrated, however, is *why* this was the case. Thus, as in previous sections, we begin with an examination of how the language(s) of the ancestors of the Slavs changed, i.e. an account of the evolution of the phonology, morphosyntax, and lexicon. Interspersed with each subsection is an analysis of where these changes originated, whether inside the speech communities or from neighbouring peoples, or from so-called substrata within the territory occupied by the ancestors of the Slav nations. It will be demonstrated that many of the mysterious changes, which laid the foundations for the modern Slavonic languages, originated during this period, and the majority of them were the results of contact with foreign groups.

4.15 Proto-Slavonic Phonology

The 'beginning of the end' of Slavonic linguistic unity may be traced back to the Proto-Slavonic era. In many ways, this period was the middle point in the history of the Slavonic languages thus far. It represents several things. First, it was during

this time that increased contact with outside groups, some possessing a more advanced material culture, and some a less advanced one, brought the peoples of north-eastern Europe more and more into the orbit of the great Mediterranean and Middle Eastern civilizations. Not only did such intensified cultural contacts have a profound and irreversible effect on these peoples, it also had a similar effect on their languages, most obviously on the lexicon, as new concepts and technologies were imported into the region at an ever-accelerating rate.

The importance of the fact that the predecessors of the Slavs happened to occupy a region that was effectively 'between two worlds', i.e. Europe (represented by the Greco-Roman civilizations and their inheritors) and Asia (the Indo-Iranian and Altaic pastoralist-nomadic tribes of the Eurasian interior, as well as the Islamic cultures later on, among others), cannot be understated. Indeed, the ramifications of this continue to influence us to the present day. Witness the perennial duality of the Western view of the Russian nation as either 'European' or 'Asiatic'. This theme has coloured outsiders' perceptions of the Slav nations, and to an equal extent the Slavs' perceptions of themselves for centuries. These complex and sensitive issues can be traced back to this time, when the ancestors of the Slavs were beginning to expand out of their traditional homeland.

This 'Eurasian' perspective left equally deep marks on the Slavonic languages as well. We begin with an examination and analysis of the evolution of the phonology between the Balto-Slavonic and the Proto-Slavonic periods.

	Stops		Spirants		Affricates	Nasals	Resonants		
Labial	p	b					m		
Dental	t	d	s	z			n	r	l
Palatal	tʰ	dʰ	š	ž	č	nʰ	rʰ	lʰ	
Velar	k	g	x						

Figure 4.16: the consonantal inventory of Proto-Slavonic

After the changes in the vocalic inventory during the BSl period, the situation was

ī, ĭ/j	ū, ŭ/w
ē, ě	ā, ǣ

Figure 4.17: the vocalic inventory of Proto-Slavonic

Even at first glance, it is obvious that many significant phonological events occurred. The evolution of the early Slavonic language(s) was accelerating. The trend towards consolidating the phonemic inventory, which had been in operation since the decline of PIE, was reversed. Two processes, operating from this point in

time until the end of Slavonic linguistic unity (Schenker, Dawn of Slavic 82), dictated in large measure the nature of the phonological changes. They were the tendencies towards intrasyllabic harmony (also known as syllabic synharmonism) and rising sonority. It is arguable that these were not autochthonous developments, i.e. it is possible that they originated or at very least were facilitated by increasing contact with the Altaic languages. Even if it was the case that certain specific changes were actuated before contact with Altaic commenced, and thus were not initially conditioned by that, then it is certainly the case that subsequent contact scenarios reinforced the initial trends. Finally, Galton argued that these events were unique among the IE languages.

4.16 Syllabic Synharmonism and Rising Sonority

The tendencies noted above had several specific, attendant manifestations. The general principle of intrasyllabic harmony appeared in several ways. First, a correlation between the vocalic distinctive feature [+front] and the consonantal feature [+palatal] developed. As the name suggested, this correlation operated within the boundaries of an individual syllable. Naturally, as the features [front] and [palatal] were correlated, the corresponding distinctive features [back] and [plain] followed suit.¹⁸ The outcome of these novel correlations were various phonological accommodations and mutations. These included the palatalization of velar

¹⁸ More accurately [-front] and [-palatal]; the description of the distinction is not a very important one, as the oppositions were binary, i.e. there was at this point no feature [centre] for vowels, nor [+aspirate] for consonants.

consonants in certain environments, jotation (also known as yodization), and the fronting of back vowels occurring to the right of palatal consonants and /j/.

The generalized tendency toward rising sonority produced other linguistic 'side effects' as well. Schenker described this tendency as a move

[...] toward an intrasyllabic arrangement of phonemes proceeding from lower to higher sonority (the phonemes with the lowest sonority are voiceless spirants; those with the highest are low vowels.) (ibid. 82)

Among the reflexes of the tendency toward rising sonority were the prothesis of the semivowels /j/ and /w/ and the Law of Open Syllables (LOS). There were further consequences of these changes, specific to the modifications of the morphonology of PSI (and later CSI) that were wrought by LOS. These were the deletion of word-final consonants, the simplification of certain consonant clusters under certain contexts, and the monophthongization of diphthongs. Each these topics is examined briefly on the following pages, after which a general analysis has been provided.

It is important to emphasize that although many of the changes to the phonemic inventory and phonological rules that occurred during the PSI period are grouped under the two general headings of Intrasyllabic Harmony and Rising Sonority, they did not necessarily occur in a linear order. We rely heavily on the schema provided by Alexander Schenker (Dawn of Slavic, 'Proto-Slavonic') with supplemental evidence provided by Shevelov, Arumaa, and Meillet, as this allows

for a concise yet thorough examination of the individual processes. It can, though, appear as if the individual changes proceeded in an orderly fashion from A>B>C, etc. This was certainly not the case. While certain changes were enabled by those preceding them, the actuation and propagation of one change did not necessarily put a stop to those prior to it.

Many of the processes, which originated in the PSI period were operational right until the end of the first millennium CE. The first process to be discussed is an example of this. One reflex of rising sonority was the constraint on syllable structure: no syllable could end in a consonant. This is the LOS, which is evident well into the Slavonic literary period, as OCS, like PSI, did not permit closed syllables.

BSI	OCS
sūnūs ('son')	synъ
pādēs ('you fell')	pade
pādēt ('he fell')	pade
wīlkād ('wolf')	vьlkъ
pāntīm	pqъ
ēzūm	azъ

Figure 4.18: Elimination of word-final consonants (Schenker, *Dawn of Slavic* 82, Shevelov, 224.)

Similarly, certain consonant clusters were modified due to the effects of LOS, either by simplification, or by the insertion of a vowel. The latter method was favoured in OCS. Impermissible clusters included /kt/, /dm/, /pn/, /bt/, /zsl/, /bwī/, /ptɪ/, and /lm/ (Shevelov 181-205; Meillet 146-154).

PIE	BSI	OCS
*kai- ('heat')	*pō-ktōs ('sweat')	potъ
*dō- ('give')	*dā-dmī ('I will give')	damъ
*swep-no-s ('sleep')	*sū-pnōs ('sleep')	сънъ
*g ^h reb ^h - ('dig', 'bury', 'scratch')	*grē-btēj ('to bury')	greti
	*mā-zslō ('oil')	maslo
	*ō-bwī-dē-tēj ('to offend')	obiděti
*nek ^w -t- ('night')	*nō-ktīs ('night')	noštъ
	ptrū-jōs ('paternal uncle')	stryi

Figure 4.19: Elimination of consonant clusters (Schenker ibid. 83)

Another method of retaining open syllables was the shifting of morpheme boundaries. As long as the juxtaposed elements did not produce an impermissible consonant cluster, if the prefix ended in a consonant, it could be shifted to the initial position of the root, thereby ensuring that all syllables remained open.

BSI	OCS
vъn-ušiti ('to hear out')	vъ-nušiti
kъn-jemu ('to him')	kъ-njemu

Figure 4.20: Morpheme boundary shift (ibid.)

The last process for which Rising Sonority was a catalyst at this point was semivowel prothesis. Specifically, /ū/ developed a prothetic /w/, while /i/, /e/, and often /a/ developed prothetic /j/ (Shevelov 235-248; Arumaa 118-125). Similar to LOS above, prothesis remained an active process for a significant amount of time—certainly well after the disintegration of CSI. According to Schenker, not only was it operative throughout PSI and CSI, but Polabian, Polish, Czech, Belarusian, and Lower Sorbian at one point or another displayed prothesis (ibid. 83, fn. 130).

BSI	OCS
ūz- ('up')	vъz-
ūdrā ('otter')	OESl. vydra

īdōm ('I go')	idŏ
ěsmī ('I am')	jesmь
āgn- ('lamb')	jagnьсѣ

Figure 4.21: Semivowel prothesis (ibid.)

While the above-mentioned linguistic changes were all reflexes of the tendency toward Rising Sonority, the ones discussed at this point were the reflexes of the tendency toward Intrasyllabic Harmony. The first process of this type that occurred was the First Velar Palatalization (FVP). Somewhat atypically, this process acted regressively (many other phonological changes were of the orientation left>right). Essentially, preceding a front vowel, BSl consonants /k/ (and /sk/), and /g/ (with /zg/) were palatalized if they occurred immediately after a front vowel. Thus, /k/ > /č/, /sk/ > /šč/, /g/ > /ž/ > /ź/, and /zg/ > /žž/. These new phonemes were in complementary distribution with plain /k/ and /g/, similar to the relationship between the ersatz allophones /š/ and /x/. Note that the clusters /šč/ and /žž/ did not remain stable into the next period (Shevelov 249-263).

Vocative		Nominative Singular	
BSI	OCS	BSI	OCS
wĭlk-ě ('wolf')	vľčє	wĭlk-ǫ-s	vľkъ
bǎg-ě ('god')	bože	bǎg-ǫ-s	bogъ
dǫus'-ě ('spirit')	duše	dǫus'-ǫ-s	duxъ

Figure 4.22: Basic reflexes of the First Velar Palatalization (ibid.)

The process of Jotation (or Yodization) also fell under the general heading of Intrasyllabic Harmony. Basically, the semivowel /j/ triggered the palatalization of following consonants (ibid. 207-222). Jotation of the velar stops yielded the same reflexes as FVP, i.e. /k/ > /č/ and /g/ > /ž/ > /ǰ/. The clusters /sk/ and /zg/ also yielded the exact same results as above. Furthermore, the phoneme /x/ was also affected by jotation, yielding the reflex /š/. Jotation of the sibilant phonemes yielded the following: /s/ > /š/, and /z/ > /ž/. In front of /j/, labial consonants developed an epenthetic /l/, thus /Pj/ > /Plj/ in most areas. Jotation was a process that continued beyond the PSi period. Specifically, the dental stops were subject to this process later on; thus, they are discussed under the CSI phonology section.

BSl	OCS
plāk-j-ōm ('I cry')	pláčŏ
lūg-j-ōm ('I lie')	lъžŏ
jīsk-j-ōm ('I seek')	ištŏ

BSl	OCS
dōus-j-ōm ('I blow')	dušŏ
pějs-j-ōm ('I write')	pišŏ
māz-j-ōm ('I smear')	mažŏ

Figure 4.23: Various reflexes of jotation (ibid., 84)

FVP and the process of jotation produced a novel phonological opposition that had an enormous impact on the subsequent morphological development of Slavonic: the distinction between 'hard' and 'soft' consonants. The soft consonants consisted of those that were palatal, resonants, and the semi-vowel /j/. All the others were phonologically 'hard'.

Turning to the vocalic inventory, two important events deserve mention. The first was the fronting of the back vowels /ū/ and /a/ when they occurred after jotted or palatal consonants. It is this phenomenon that was responsible for the hard vs. soft alternation in the various inflectional paradigms of the later Slavonic languages. Basically, following a stem-final consonant that was palatal, resonant, or the semi-vowel /j/, /ē/ developed into /ā/ and /ī/ for /ū/ (ibid 264-270).

	sel- ('village')	pol'- ('field')
Nom. Sg.	sel-o	pol'-e
Gen. Sg.	sel-a	pol'-ě
Loc. Sg.	sel-ě	pol'-i
Inst. Sg.	sel-omъ	pol'-emъ
Gen. Pl.	sel-ъ	pol'-ъ
Inst. Pl.	sel-y	pol'-i

Figure 4.24: The results of the fronting of back vowels after soft consonants: 'hard' v. 'soft' oppositions (ibid., 86)

The second phonological development affecting the vocalic inventory of the CS1 period was the monophthongization of diphthongs in /j/ and /w/. This was a

result of LOS (Schenker Dawn of Slavic 86; Arumaa 93-100; Meillet 57-59; Shevelov 271-293), and yielded the following reflexes: /ej/>/i/, /aj/>/ē/, and /ew/>/jū/, and /aw/>/ū/. (The quantity of the vocalic element of the diphthongs was not relevant.) Note also that the new segment /jū/ was immune to fronting; recall that back vowels following a /j/ tended to change to /i/ (see above). The reflexes of these instances of monophthongization are conventionally denoted by subscript₂, thus ē₂, ī₂, ū₂.

BSI Diphthong	EPSI Monophthong
āj	ē ₂ (e.g. bĕrĕtĕ)
ĕj	ī ₂ (e.g. stĭgnōm)
āw	ū ₂ (e.g. lūčĭ)
ĕw	(j)ū ₂ (e.g. bjūdōm)

Figure 4.25: Elimination of diphthongs in /j/ and /w/ (ibid.).

As with many rules, there are exceptions to the phonological tendencies that manifested themselves in Slavonic during the PSI period. An important instance of this is an apparent exception to the tendency toward intrasyllabic harmony, wherein the phoneme /ē/ was shifted back when preceded by a soft consonant. The OCS texts from the Macedonian dialect area indicated that this region of the Slavonic linguistic

community resisted this change; all other areas seem to have contravened the syllabic synharmonism tendency, although analogy played a significant role in this particular instance, producing certain variant forms.

EPSI	OESI	OCS
*kri̯kētēj ('to shout')	kričati	kričeti
*slūšētēj ('to hear')	slyšati	slyšeti
*dīr̥gētēj ('to hold')	dьr̥žati	dьr̥žeti
*stājētēj ('to stand')	stojati	stojeti

Figure 4.26: Backing of /ē/ after 'soft' (palatal and jotted) consonants (ibid., 88)

Lastly, it seems to have been the case that within the matrix of distinctive features of the vocalic phonemes, labialization was marginal throughout the BSI and PSI periods. However, due to the monophthongization of the ancient diphthongs, one consequence of which was the markedly labialised /ū₂/, this specific feature re-assumed its former phonemic status. As a result, the more archaic phoneme /ū₁/ lost its vestigial labialization entirely, yielding a new phoneme whose specifications were [+vocalic, +back, +high, -labial]. The traditional phonetic symbol for this unit is [ɨ], while phonologically it can be transcribed /j̄/ (Meillet 53-54; Arumaa 63-66).

In terms of the vocalic inventory, the transition from the PSI to the CSI periods seems to have occurred as a result of the augmentation of the vocalic system. This

augmentation took two primary forms: the new vocalic phonemes resulting from the monophthongization of the diphthongs, and innovations in the intonation system. More specifically, the collapse of the old diphthongs resulted in a new phonemic distinction in pitch. Prior to this point, long vowels and diphthongs displayed non-distinctive and regular rising pitch, and short vowels and diphthongs automatically exhibited non-rising, i.e. falling pitch. The change in phonemic status occurred because the reduction of either two short vowels or a short diphthong produced long vowels with non-rising pitch. In the new system, those vowels displaying rising pitch were termed 'acute', while those displaying non-rising pitch were termed 'circumflex', and the symbols are marked with the corresponding diacritics. Thus, a threefold contrast was introduced to the vocalic inventory, which resulted in the following system.

	Acute			Circumflex				
	Front	Back		Front	Back		Front	Back
		-round	+round		-round	+round		
High	ī	ȳ	ū	ĩ	ȳ	ũ	ĩ	ũ
Low	ě	ǣ		ě	ǣ		ě	ǣ

Figure 4.27: the vocalic inventory of Early Common Slavonic (ibid. 89)

It seems to us rather difficult and arbitrary to propose a concrete, absolute chrono-linguistic division between Proto-Slavonic and Common Slavonic. One reason for this is that many of the phonological and morphological changes that

distinguish these latter incarnations of the ancestral Slavonic language(s) do not fall conveniently into isolated periods. Rather, it appears that a number of grammatical changes appeared at a specific point in time. Historically speaking, they seem to have coincided with the initial demographic/linguistic expansion of the Slav tribes out of their ancient homeland back toward the centres of Mediterranean civilisation. However, linguistically speaking, these structural changes seem to have become fully integrated into the operational morphonology/morphosyntax of the languages, so that in their early stages, they affected the entire Slavonic speech community in the same way and to the same extent, while as this community physically expanded and/or geographically shifted, the same processes were operating, but often producing different results in different areas. Intuitively, this is one argument in favour of a demographic expansion, i.e. the actual number of speakers of Slavonic dialects was steadily increasing throughout the Common Era. Regardless, though, of whether this was a full-blown case of population migration, or simply increasing instances of such demic diffusion processes as elite displacement, etc., Slavonic dialects were intrusive to previously non-Slavonic territories.

Thus, it would seem rather contrived to argue in favour of distinct Proto- and Common Slavonic periods or languages. This appears to be the attitude of such scholars as Schenker, who refer to the entire period of Slavonic linguistic unity as Proto-Slavonic, and differentiate sub-periods as Late Proto-Slavonic, Early Proto-Slavonic, etc. However, the essential reality remains that there were two rather distinct phases of the fragmentation of Slavonic unity: to use Lehr-Splawiński's terminology again (op cit.), the one 'longer and slower, the other more radical'. To

differentiate between these two phases of development, we have chosen to retain the other traditional dichotomy: Proto-Slavonic as opposed to Common Slavonic. In this scheme, the former term designates the more ancient period, specifically, that during which contacts with foreign peoples and languages were extremely limited, and the same processes of grammatical change had roughly the same effects throughout the Slavonic speech community. The term Common Slavonic on the other hand denotes the later period (and the chronologically shorter one), during which linguistic contact increased in frequency and impact, and during which the fragmentation of whatever linguistic unity remained was accelerated. This is most directly evidenced by the fact that although the same linguistic processes were at work as during the previous period, they began to have different effects in different geographical areas.

4.17 Common Slavonic Phonology

The first signal events of the CSI period, phonologically speaking, are the Second and Third Velar Palatalizations. As with all other phonological changes occurring during this phase of the evolution of Slavonic, the individual reflexes of these two general changes were dialect-specific. However, as noted above, the fact that the changes themselves happened throughout Slavonic, regardless of the individual dialectal reflex, indicates a high degree of advergence was still operative despite the political and demographic upheaval, which was one of the hallmarks of this period. In Schenker's words,

One may surmise that they [i.e. individual linguistic changes] began when the territorial integrity of Slavonic was breaking up in the sixth century as the Slavs started their push into the Balkans and Central Europe. It is even possible to assign certain changes to the beginning or the end of Late Proto-Slavonic by assuming that greater dialectal variation implies a more recent event. (Dawn of Slavic 89)

Returning to the point at hand, during the early Common Slavonic period, the velar stops underwent two subsequent palatalizations: the second one was regressive, as was FVP, whereas the third one was progressive, i.e. affecting the consonantal phoneme to the right of the palatalizing agent. Both the second (SVP) and third (TVP) velar palatalizations yielded identical reflexes. However, those reflexes differed slightly depending on which part of the Slavonic continuum was affected. Thus, SVP occurred when /ē₂/ or /ī₂/ (both originating from /aj/) palatalized the preceding velar consonant, causing /k/ > /c/, /g/ > /ǰ/ (later > /z'/ in most dialects), and /x/ > /š/ (West Slavonic dialects) or /s'/ (East and South Slavonic dialects). Likewise, TVP was triggered when /i₂/ (short or long) preceded a velar (sometimes operating in the environment VNC [+velar]) (Shevelov 294-310; 338-363).

PSI	CSI	
	East/South	West
*kājnā ('price')	cē ₂ nā	
*gājī- ('very')	ǰē ₂ lā	
*xājī- ('grey')	s'ē ₂ d-	šē ₂ d-

Figure 4.28: The Second Velar Palatalization (ibid. 89)

PSI	CSI	
	East/South	West
*āwīkā ('sheep')	āwīcā	
*lējkā ('face')	līcē	
*kūnīng- ('ruler')	kūnīng'	
*wīx- ('all')	wīs'-	wīš-

Figure 4.29: The Third Velar Palatalization (ibid. 90)

Another important consonantal development, that occurred in the CSI period affected the consonantal cluster comprised of a dental stop (voiced or voiceless) plus /l/. Basically, the clusters /dl/ and /tl/ remained unchanged in the West Slavonic dialects, while in the East and South regions, the dental stop assimilated to the liquid, yielding /ll/, which was further simplified to /l/. Note that in certain dialects, however, /tl/ and /dl/ were replaced by the sequences /kl/ and /gl/ (Meillet 138-139; Shevelov 370-374). Interestingly, this particular change occurred also in some of the Baltic dialects; the Slavonic dialects in which it occurred were those geographically adjacent to the Baltic area, i.e. the Pskov and Novgorod ESl. regions, as well as the WSl. Kashubian and Mazovian areas. (ibid.)—a strong indication that convergence processes were at work.

PSI	CSI	
	South/East	West
*mětlā ('swept')	Ru. melá, S-Cr. mèla	Cz. metla, Po. miotła
*sādlā ('fat')	Ru. sálo, S-Cr. sǎlo	Cz. sádlo, Po. sadło

Figure 4.30: Resolution of /tl/ and /dl/ (ibid. 92)

The monophthongization of diphthongs resulting from the operation of LOS was the catalyst of another noteworthy phonological event of the CSI period: the creation of the nasalized vowels (Shevelov 311-336; Arumaa 126-137; Meillet 59-

The issue of these nasal vowels is a particularly complex one; there has traditionally been a great deal of debate as to whether they were individual vocalic phonemes with a secondary nasal articulation, or sequences of V+N. The issue is not specifically relevant to the topic at hand, though. The important points for the present discussion are that the general tendency toward intrasyllabic harmony, specifically manifested in LOS, which originated in the PSI period, and continued to operate throughout the CSI period until the demise of Slavonic linguistic unity, caused radical changes in the phonology of the ancient Slavonic dialects.

From this point, the phonological evolution of CSI becomes especially complex, attesting to the rapidity of change that was a result of accelerated contact with non-Slavonic languages during the historical period known traditionally as 'The Great Migrations'. The increasingly intensive contacts with various Altaic languages mentioned above cemented the unique evolutionary course of the Slavonic languages, and increased contact with other neighbouring language groups, e.g. Germanic to the West, Finnic to the north, and Greek to the south began to play a more significant role as the vestiges of earlier contacts with the Baltic and Indo-Iranian-speaking peoples began to be buried under a new wave of convergence-induced changes. Contemporaneous with the 'Asiatic' influence on the realm of Slavonic material, spiritual, and political culture was the equally profound linguistic pressure, generated by the frequent annexation of traditionally Slavonic-speaking territories. As we have seen, though, this was not always the case, and in a number of regions, the Slavs themselves were the intruders who rapidly established dominance over a number of new territories. This was precisely what caused the fragmentation of Common

Slavonic: the unique, local linguistic influences undergone by the CSI dialects in different areas.¹⁹ This combined with the increased distances over which any inter-tribal communication was required to travel mitigated against very much linguistic conservatism, at least on the periphery of the Slavonic-speaking world.

4.18 LCS Dialect Areas

A major feature that modern scholars have used to differentiate the ultimately permanent division of the Slavonic dialects into three or four distinct regions emerged during the CSI era. It must be remembered that this schema is quite flexible; as with any other isogloss, borders were regions where the rate of linguistic convergence tended to be quite high. With that caveat in mind, certain general tendencies are discernable, and it was this principle that led scholars such as Roman Jakobson (1952) to propose the fourfold division of the Slavonic dialect areas. This division was based primarily on the nature of the evolution of the PIE diphthongs containing liquid sonorants. As with all diphthongs previously discussed, LOS demanded the elimination or alteration of such sequences. The fact that the results of this particular change are so varied points to the fact that this was probably one of the later phonological changes to occur; indeed, the resolution of these diphthongs represents the profound effects of intrasyllabic harmony specifically, and generally of the power of language contact to radically alter the structure of a language. It is, under such circumstances, difficult to understate the influence that one language can have on

¹⁹ See Miller for a discussion of dialectal diversity and isoglosses in CSI.

another under the right circumstances. While such processes as analogy can also exert a profound influence on the structure of a language, they are ultimately secondary to the catalyst provided by linguistic contact.

4.19 Elimination of Diphthongs in Liquid Sonorants

The PIE and BSl. ancestors of the Slavonic dialects allowed a high degree of latitude in the formation of diphthongs (thirty-six and fifty-two, respectively). This number was effectively reduced to zero by the operation of LOS, which effected the consolidation of all biphonemic units. Since no syllable during this period could end in a consonant, any consonants had to be either assimilated to the adjacent vowel, or deleted. Thus, the ancient sequences /iR/, /uR/, /eR/, and /aR/ were all that were left of the earlier diphthongs. (Note that /R/ stands for either of the liquid sonorants /r/ or /l/, while vowels bearing both acute and circumflex pitch participated in these changes.) These sequences could occur in any environment: initially or medially. The word-initial occurrences of the type VRC were consolidated early on, judging from the uniformity of the later reconstructed reflexes. It was the sequences occurring in the middle of a word, for which there was appreciably more dissimilarity in the reflexes. These sequences were of the type CVRC (traditionally known as TORT sequences), and the processes of regularization was lengthy.

The clusters of the type /aRC/, which were apparently the only ones of the #VRC, were resolved via metathesis, whereby the vowel and the sonorant reversed positions. The quantitative distinctions, i.e. /ā/ vs. /ǎ/ were retained in the northern Slavonic dialects, while in other areas (mainly South Slavonic), the ‘short diphthongs were lengthened and merged with the long ones, transferring the difference in vowel quantity to that of pitch’. (ibid. 94)

PSl	OCS	Rus.	Pol.
ǎrwīn (‘even’)	равѣнъ	róvnj	równy
ǎlkwt- (‘elbow’)	lakътъ	lókot’	łokieć
ǎrdlǎ (‘plough’)	ralo	rálo	radło
ǎlkām- (‘greedy’)	lakomъ	lákomyj	łakomy

Figure 4.31: The resolution of the /aRC/ sequences. (ibid., 94)

More complex was the development of the word-internal sequences /CiRC/, /CuRC/, /CeRC/, and /CaRC/. In each dialect area the reflexes were different. In the first two cases, during the PSl period, the vowel underwent elision, and its syllabic function devolved onto the adjacent liquid, giving the sequences /C_r’C/, /C_l’C/ </CiRC/, or /C_rC/, /C_lC/. Note the correlation between the phonetic features [front] and [palatal], [back] and [plain]. Phonemic length was superseded by the acute in

these instances. Subsequently, syllabic liquids lost that function as a vowel was inserted into the cluster, reinstating the /CVRC/ pattern. This was not the case in South Slavonic or in the ancestors of the Czech and Slovak dialects, where syllabic liquids were retained. The fact that the /CVRC/ pattern re-emerged indicates the decline of LOS—and the rapidly approaching decadence of CSI. Furthermore, in those dialects where syllabic liquids remained, the hard and soft variants tended to merge.

PSl	OCS	OESl	Pol.
sr'p- ('sickle')	srъpъ	srъpъ	sirp
trg- ('market')	trъgъ	trъgъ	tarzyc
v'k- ('wolf')	vъkъ	vъkъ	wilk
sln-ik-ǎ ('sun')	slъnъce	slъnъce	sluńce
gřdlǎ ('throat')		gъrlo	garło
pf'n- ('full')		ръln-	pełny

Figure 4.32: The reflexes of the /CiRC/ and /CuRC/ sequences. (Schenker, *ibid.* 94; Cejtin, et al.; Brückner)

Turning finally to the sequences /CeRC/ and /CaRC/, here are found some of the last changes common to all or most of the Slavonic dialects. Again, it was the fact

that a change occurred, not the regional variants of the change, which give an indication of the extent of CSI dialectal unity. In the East Slavonic and North-West Slavonic, i.e. the later Kashubian and Polabian areas, these two clusters merged. As above, in the South and Czech-Slovak areas, metathesis again took place, and the short diphthongs were lengthened. In certain dialects (the ancestors of the Serbo-Croat and Slovenian languages), the new pitch distinctions were retained, while in other varieties pitch was either reinterpreted as the locus of stress or the vocalic quantity was affected. The former was the case in the antecedents of Bulgarian and Macedonian, while the latter method was preferred in Czech and Slovak. Yet another mechanism responsible for the reconfiguration of the liquid sonorant diphthongs was pleophony (or polnoglasié, as it is known in Russian). This process involved the epenthesis of a homorganic vowel in the position immediately following the liquid. In such instances, the pre-existing pitch was re-interpreted as the locus of the stress. The evolving dynamic between pitch and stress is a complex matter, and rightly belongs in the investigation of the individual dialects after the fragmentation of CSI, and thus falls outside the scope of this work.

PSl	Rus.	Pol.	Cz.	U. Sorb.	S-Cr.	Bg.
běrg- (‘bank’)	béreg	brzeg	břeh	brjoh	brég	brég-ъt
běrzā (‘birch’)	berěza	brzoza	bříza	brěza	brèza	bréza
bārnā	boroná	brona	brana	bróna	brána	braná

('harrow')						
wārnā (‘crow’)	voróna	wrona	vrána	wróna	vrāna	vrána
gělb- (‘trough’)	žólob	zlób	žleb	žlob	žlijeb	žlab-ъt
pělwā (‘chaff’)	polóba	plewa	pléva	pluwa	plěva	pljáva
gǎld- (‘hunger’)	gólod	glód	hlad	hlód	glád	glad-ъt
bāltā (‘marsh’)	bolóto	bloto	bláto	blóto	blāto	bláto

Figure 4.33: Resolution of /CeRC/ and /CaRC/ clusters. (Schenker, *ibid.* 95)

4.20 Development of Palatalized Dental Stops

Another key phonological change that was active in the CSI period affected the palatalized dental stops /tʰ/ and /dʰ/. The sources of these phonemes were PSI /dj/ > /dʰ/, where as /tʰ/ had one of three origins. These were /tj/ > /tʰ/, /gt/ or /kt/ /front vowel/ > /kʰtʰ/ > /tʰ/ (Schenker, *ibid.* 95). These phonemes displayed five main different reflexes: /št/, /žd/ in OCS, /kʰ/, /gʰ/ in Macedonian, /č/, /ž/ in Serbo-Croat, /č/, /ž/ in Slovenian and East Slavonic, and /c/, /z/ in West Slavonic.

PSl	OCS	Rus.	Pol.
swě ₂ t'ā	svěšta	svečá	świeca
năt'ĭ	noštъ	noč'	noc
măt'ěj	mošti	moč'	móc
měd'ā	mežda	mežá	miedza

Figure 4.34: The evolution of /t'/ and /d'/ (ibid., 96).

4.21 The Evolution of the *Jers*

The next development that had a direct impact on the evolution of the Slavonic languages was the evolution of the short high vowels, /ĭ/ and /ŭ/, which later came to be known as *jer'* (ѣ) and *jer* (Ѹ) in OCS. These letters represent the reduced PSl phonemes, which ultimately were eliminated from the languages altogether or were reinterpreted as full vowels. Basically, an alternating pattern of 'strong' and 'weak' prevailed. Counting left from the end of a word, the first *jer* was strong, and the second and subsequent alternating ones were weak. These weak *jers* suffered elision, and the remaining strong ones yielded different reflexes in the emergent, post-fragmentation dialects.

As with the monophthongization of diphthongs mentioned above, detailed discussion of the individual reflexes belongs specifically to the era of the individual languages, but brief mention is made here for the sake of completeness. One point bears particular emphasis, though. The elimination of weak *jers* allowed the emergence of closed syllables, and it was this phenomenon and the subsequent reconfiguration of the dialectal phonological inventories that is often listed as one of the major hallmarks of the decline of the ancient Slavonic linguistic unity.

Nor did the process end with the fall of the *jers*. This in turn gave rise to several compensatory phenomena as the various dialects coped with a radical morphonological restructuring. A widespread reaction was the rise of the so-called 'neoacute', as the intonation system in the various dialects was altered in order to balance the loss of the *jers*. Pursuant to this was a shift in the oppositions between the qualitative and quantitative elements of the vocalic inventory. For further discussion of these post-CSI developments, see Schenker (ibid. 97), Shevelov (445-448), and Meillet (110-116).

4.22 Proto- and Common Slavonic Morphology and Syntax

Unlike the BSl period, the PSl and CSI phases were more dynamic. Many changes were prompted directly or indirectly by the radical changes taking place in the areas of phonetics and phonology, and the PSl and CSI morphological systems saw several significant innovations. Both the nominal and verbal morphology were

affected. It seems that in contrast to the phonological re-ordering that went on in this period, changes in the morphological structure were in large measure due to language-internal processes of change, e.g. analogy. As such, although such changes are important for our overall understanding of the evolution of Slavonic, they are not the direct result of language contact. Therefore, only a brief survey of the more important developments is provided at this time. It is important to remember, though, that the motivation of the analogical changes which took place in the PSI and CSI grammars was ultimately external; contact-induced changes in the phonological rules caused widespread disruption in the phonological structuring of the language, which in turn spread like ripples in a pond throughout the rest of the structures of the language. Despite such restructuring, the Early Slavonic language retained much of the morphological and syntactic functions and constructions inherited from PIE. It distinguished nominal and verbal categories, the former including substantives (nouns and pronouns), adjectives, and numerals. Nominal morphology included specification for gender (masculine, feminine, neuter), number (singular, dual, plural), and case (nominative, accusative, genitive, dative, instrumental, locative). Qualitative adjectives displayed gradation (positive, comparative, superlative), and non-possessive adjectives could be definite or indefinite. Pronouns could be of two types: gendered and non-gendered. Verbal categories retained in Slavonic included the reflexive and non-reflexive genera, the indicative mood, as well as the PIE tense system, which was heavily modified. Slavonic verbs were also inflected for person and number (1st, 2nd, 3rd, singular, dual, plural) if finite. Non-finite verbal constructions included the infinitive, participles, and verbal nouns.

Beginning with PS1 nominal inflection, one of the first modifications to occur was a distinction between two masculine subgenera: the personal and non-personal. This phenomenon was largely limited to the *ǫ/jǫ* stem declensions. It was expressed by case syncretism; the personal subgender combined the accusative and genitive paradigms, while the non-personal showed no syncretism. Ultimately, the personal~non-personal subgender distinction evolved into an animate~inanimate opposition (Schenker, 'Proto-Slavonic' 85).

The next major modification of the Slavonic morphological system was directly attributable to phonological processes, specifically, the fronting of back vowels, LOS, and the monophthongization of diphthongs. As noted above, this produced an opposition between 'hard' (non-palatalized) and 'soft' (palatalized) consonants, and this in turn caused a reinterpretation of the PIE thematic declensions. Schenker (ibid., 87-89.) catalogued the effects of this process. First, the constraints on syllable structure dictated by the Rising Sonority tendency resulted in the collapse of the PIE thematic endings into monomorphemic PS1 endings (Schenker Dawn of Slavic 123-125). Secondly, nominative and accusative neuter stems underwent syncretism. Athematic stems were based on the pattern of the nominative singular, whereas the *-ǫ* stems borrowed the ending *-o* from the demonstrative pronoun *to* ('that'). Nominative and accusative neuter plurals were designated by the ending *-a*. In the remainder of the declensional paradigms, there was a high degree of analogical borrowing. For example, in the nominative and vocative of the *-ǫ* stems, the ending (-Ѣ) was adopted from the *-ǫ* stems, and the masculine and feminine *-ǫ* stems as well as the athematic stems influenced each other. Several endings also had their origins

in the pronominal paradigms, e.g. the nominative and locative plurals of the $-\delta$ stems ($-i_2$ and $-\acute{e}_2x\tau$, respectively), the instrumental singular endings $-oj\varphi/-ej\varphi$. The appearance of certain other endings has yet to be adequately accounted for, namely the athematic locative singular $-e$, and the $-\delta$ stem dative singular in $-u$ and instrumental plural in $-y$ (Schenker *ibid.* 87-89).

Moving to important developments in the verbal morphology, barring the retention of the archaic athematic verbs (with changes in form induced by the phonological changes outlined above), this part of the grammar saw the reanalysis of several PIE oppositions and formations, including the development of a new system of verbal aspect, the rise of the conditional (used in optative and 'if' clauses [*ibid.* 148]) and several changes in the ordering of the PIE tense constructions.

Slavonic retained four athematic verbs, in which a suffix did not occur between the root and ending. Three of these athematic verbs displayed different stems for the finite forms and the infinitive. The four verbs were 'to be' (*jestь~byti*), 'to know' (*věděti~věstь*), 'to give' (*dati~dastь*) and 'to eat' (*jasti*). Of these, 'to eat' did not display any stem alternation, while the infinitive stem of 'to be' was the result of the suppletion of another PIE form, 'to know' derived its infinitive stem from a present tense form, and the present tense form of 'to give' was the result of a process of reduplication (*ibid.* 92). The remainder of the Slavonic verbs were thematic, i.e. their stems were constructed on the template $\{\{\text{root}\}+\{\text{suffix}\}\}+\{\text{person/number ending}\}$. The thematic verbs can be classified based on the suffix used in their

construction. These suffixes were *-0-0-* (i.e. *-zero-zero*), *-n/-nq-*, *-j/-a-*, *-u-j/-ov-a-*, *-a-j/-a-*, *-i-*, and *-i/-ě-* (ibid. 94; Meillet, 205-209, 209-240).

Distinctions in verbal aspect, i.e. completion v. non-completion of an action, had been expressed in various ways since PPIE, whether in the form of *Aktionsart*, or in the association of the tenses with aspectual differentiation later on. This opposition between completion v. non-completion of an act was formalized, such that the perfective aspect described a completed action, and the imperfective denoted an incomplete or ongoing action. The perfective was the grammatical marked form, and this opposition became a requisite Slavonic verbal category. This development led to the development of a complex dynamic between tense and aspect. Most importantly, the perfective present was reinterpreted as a future tense, so that the imperfective present was the only means of expressing an action that occurred at the moment of utterance. Regarding the past tense formations, the aorist was identified with the perfective, and the imperfect with the imperfective. Subsequently, PSI developed analytical perfect, pluperfect and imperfective future tense formations (Meillet 282-298).

When reconstructing the grammar of PSI and CSI, scholars have traditionally given more precedence to the phonological and morphological patterns of these languages. Less attention has been paid to the syntactic rules and constructions, and when research has been conducted in this area, it has tended to concentrate on recovering the rules governing the occurrence of grammatical categories, most

notably the use of cases. (Schenker, Dawn of Slavic 107.) In terms of syntactic constructions, PSI and CSI made use of both personal and impersonal constructions. Personal constructions included active, passive and reflexive. Active constructions were those in which the subject of the sentence was marked by the nominative case, and the direct object by either the accusative or genitive cases. The basic definition of a reflexive construction was one in which the contrast between the agent and patient of the verb was neutralized. In the case of a passive syntactic construction, the patient was marked by the nominative case, while the agent (if specified) was marked by an oblique case (*ibid.*). In contrast, impersonal constructions did not specify the grammatical categories of gender, number, or person, using the 3rd singular neuter to express the action of the verb.

The six PSI/CSI cases were the nominative, accusative, genitive, dative, instrumental, and locative. In addition to these, there was also a pseudo-case, the vocative, which, as its name suggests, was used as a form of address, and thus only declined in the singular forms of substantive (*ibid.* 154). In terms of the uses of the cases, the nominative denoted the subject of the sentence and the subjective completion (if present), and the accusative was primarily used to designate the direct object, although it could also appear to mark spatial and temporal extent. The genitive case was used primarily in partitive and possessive constructions. The dative case marked the indirect object as well as the agent in impersonal sentences, as well as the subject of the infinitive in certain other constructions. To indicate the manner of performing the action expressed by the verb, or the instrument by which the action

was performed, PSI and CSI relied on the instrumental case. Finally, the locative case indicated a static temporal or spatial location.

Because the goal of this work is more to account for instances of change within the structure of the language, and less to offer a description of reconstructed data, we have only offered a brief account of the word and sentence formation mechanisms of the Early Slavonic dialects. Also, as noted previously, there has been less research into these areas of the grammar than into the phonology and lexicon. As a result, there has been less research into the role that language contact might have played in the evolution of Early Slavonic grammar. The next section offers a brief list of lexical borrowings into Slavonic.

4.23 Lexical Borrowings into Proto- and Common Slavonic

Gołąb noted, when discussing Slavonic-Iranian language contact, that

Such a number of loanwords concerning such different semantic spheres cannot be accidental: it must be interpreted as a result of a profound period of very close inter-ethnic relations [...] ('The Initial *x* in Common Slavic' 152)

Lexical borrowings, therefore, are one of the historical linguist's best indices of language contact, and by extension, language change. The following examples of Early Slavonic loanwords are categorised according to their origin. The vast majority are of Germanic origin; despite the lack of continuity in the realm of material culture

noted in the previous chapter. We view this as further evidence of the danger of equating material culture with ethnicity and language. As with the majority of specific examples provided throughout this chapter, these are drawn from Schenker (ibid. 159-160). This list is presented with the intention of demonstrating that even though Slavonic was, for much of its history, relatively conservative, a great deal of influence was exerted by neighbouring languages.

Indo-Iranian: *bogъ* ('god'), *divъ* ('demon'), *gatati* ('to divine'), *rajъ* ('paradise'), *svęť* ('holy'), *aščerъ* ('serpent'), *patriti* ('to look after'), *radi* ('for the purpose of'), *sobaka* ('dog'), *toporъ* ('axe'), *xata* ('house'), and *xvala* ('glory')

Celtic: *bagno* ('bog'), *jama* ('cave'), *korsta* ('canker'), *sęta* ('grief'), *sluga* ('servant'), *tragъ* ('footstep')

Germanic: *duma* ('thought'), *gotoviti* ('to prepare'), *kupiti* ('to buy'), *kusiti* ('to try'), *kъnezъ* ('duke'), *lękъ* ('medicine'), *lixva* ('usury'), *lъstъ* ('cunning'), *męčъ* ('sword'), *plkъ* ('host'), *stъklo* ('glass'), *šelmъ* ('helmet'), *t'ud'ъ* ('foreign'), *tyнъ* ('fence'), *xъdogъ* ('wise'), *xlębbъ* ('bread'), *xlęvъ* ('stall'), *xlъmъ* ('hill'), *xyzъ* ('house')

Latin (via Germanic): *cęsar'ъ* ('emperor'), *čeršn'a* ('cherry'), *dъska* ('board'), *kotъ* ('cat'), *kotъlъ* ('kettle'), *mъša* ('mass'), *ocъť* ('vinegar'), *osъlъ* ('ass'), *papežъ* ('pope'), *rakъ* ('casket'),

Latin (direct): *konop'a* ('flax'), *lęť'a* ('lentil'), *lot'ika* ('lettuce'), *nagorditi* ('to replace'), *poganъ* ('peasant'), *port'a* ('share, lot'), *skъdęľbъ* ('lath'), *vino* ('wine'), *kolęda* ('Christmas Eve'), *komъkati* ('to communicate'), *križъ* ('cross'), *kъmotra* ('godmother'), *olъtar'ъ* ('altar'), *židъ* ('Jew')

Greek (via Germanic): *cr'ky* ('church'), *vel'bbâdъ* ('camel')

Greek (direct): *adъ* ('hell'), *dijavolъ* ('devil'), *idolъ* ('idol'), *popъ* ('priest'), *psal'mъ* ('psalm'), *sâbota* ('sabbath'), *xrizma* ('consecrated ointment')

Turkic: *bagъr-* ('purple'), *bisъrъ* ('pearls'), *bogatyr'ъ* ('hero'), *bol'arinъ* ('nobleman'), *kar-* ('black'), *kolpakъ* ('hat'), *kovъčegъ* ('box'), *кѣn'iga/y* ('alphabet letter'/book), *sanъ* ('dignity'), *sapogъ* ('boot'), *sokačijъ* ('butcher'), *suje* ('in vain'), *tl'mačъ* ('interpreter'), *tъma* ('myriad'), *xъmel'ъ* ('hops')²⁰

We have already noted that the severing of ties between PPIE and its neighbours (to whom it bore more than a passing resemblance), combined with a rapid and widespread demographic shift, was central to the transition from PPIE to PIE. Furthermore, under the Balto-Slavonic heading, we noted the convergence/advergence processes (or lack thereof) operating between primarily Slavonic and Baltic, as well as the relationship between Slavonic and Indo-Iranian (as manifested in contacts between the Pre-Sl. tribes and the Sarmatians and Scythians), and to a lesser extent Germanic, Greek, and Celtic (primarily lexical in this instance). What we have thus far neglected to account for is the origin of the two most significant tendencies operative in the PSI-CSl period: the tendencies toward rising sonority and intrasyllabic harmony.

²⁰ See Gołąb ('The Initial *x-* in Common Slavic: A Contribution to Prehistorical Slavic-Iranian Contacts') for further discussion of lexical borrowing in PSI.

It seems most likely that these two tendencies resulted from increased contact with speakers of Turkic languages. It is certainly a historically attested fact that during the PSI-CSl period, contact between Slavonic and Altaic-speaking communities began, and the further forward in time one goes, the more intensive these contacts became. Unlike the Finno-Ugric-speaking Magyar tribes of the 9th century, the Slavs were in a subordinate relationship politically. Often elite dominance scenarios²¹ ensued, whereby the ruling elements of the increasingly urbanized Slav tribes were replaced by Altaic elements from the east, much as the Indo-Iranian groups had dominated the Slavs several centuries prior. Quite similarly, the Germanic Varangians were also beginning to exert political influence over the Eastern Slav tribes later in this period, as their cousins the Ostrogoths had in similar fashion earlier. Such scenarios seem to have had a relatively minor net effect on the language, beyond a handful of loanwords.

There were certain crucial differences, though. For one thing, whereas the Scythian and Sarmatian groups maintained their largely pastoralist-nomadic lifeways across the steppes of modern Ukraine pausing only to collect tribute from the indigenous peoples, the Altaic groups tended to operate according to rather different principles. To begin with, they tended to penetrate rather further into Europe than their Indo-Iranian predecessors. Groups such as the Avars, Bulgars, Utrigurs, and Kutrigurs, by one means or another, intruded further and further into Eastern and Central Europe and the Balkan peninsula. Whether passing through the Slav

²¹ See §3.13.

territories, or displacing groups preceding them, the intensity of contact was increasingly acute.

Galton discussed the influence of Altaic on Slavonic phonology thoroughly. He noted that the correlation of the vocalic features [front] and [back] to the consonantal features [+palatal] and [-palatal] was remarkably similar to the Altaic phenomenon of vowel harmony, which incidentally is still productive in modern Turkish, among other languages of this family. He further more pronounced that this trend was markedly 'un-Indo-European' (77) Beyond the phonological and morphological innovations spawned by the tendencies toward syllabic synharmonism and rising sonority, there are certain dialects where the vowel harmony rules have insinuated themselves to a surprising length. One of these was the Reziya dialect of Slovenian first examined by Jean Baudoin de Courtenay. A striking example of the extent to which this has become adopted by the speakers of this dialect is the set /žana/ 'wife' nsg., vs. /žene/ dual, vs. /žini/ dat. Sg (ibid., 79). Neither the Finno-Ugric nor Turkic linguistic and genetic influences are merely an extrapolation from history books, either. Apparently, isolated communities of 'Avars' were until fairly recently (and perhaps still) to be found in certain valleys of the Eastern Alps, their Asiatic origins suggested by pronounced epicanthic folds. Though doubtless these are not coincidences, only genetic research can ultimately confirm this suspicion. We should not be surprised, though, to find it confirmed. Galton summarized the issues nicely, when he noted that

[...T]he concrete circumstances under which such and such a change occurred must be explored, and by this I do not mean the previous phonological system, which somehow strove, like a self-regulating feed-

back mechanism, to fill in its empty slots or to get rid of poorly integrated phonemes. The Slavs did not need a correlation of palatalization (or a phase leading up to it) or two opposing series of vowels any more than other Indo-Europeans, but some external factor, which they sought to imitate, provided the impetus. (79-80)

Here, then, we have the crux of the issue exposed. Whether or not such a phenomenon as jotation was directly borrowed from Avar or Bulgar is not the question. What is crucial is that social factors, in this case in the form, most likely, of prestige, acted as an entry point for a foreign mechanism to enter the language. Its effects were profound and extended. And certainly there was enough contact with Altaic speakers during the period in question to facilitate this. Recall in the previous chapter that the influence seems to have been so great that the Indo-European Slav tribes began to identify more with their Asiatic neighbours from the east, adopting in whole or in part their political institutions. Notable examples of this include the quasi-feudal political institution of Blood Tanistry, which was the established method of distributing vassal principalities in Rus' until the Mongol invasions, as well as the institutions of the khanate and qaġanate. Indeed, several primary sources, e.g. Ibn-Fadlan, referred to the 'qaġan of the Rus' or the 'khan of the Saqlabs', and this seems not to have been due to ignorance or assumption on the part of otherwise relatively well-informed chroniclers (§3.13). A notable corroboration of this is that the title of 'khan' was borne by the rulers of Bulgaria until their conversion to Christianity, i.e. well after the originally intrusive elites were linguistically (and presumably genetically) assimilated to the Slavonic-speaking majority (which in turn probably

included a significant minority of ethnic Greeks). Khan Boris, father of Tsar Symeon, was the last to bear this title (r. 852-889). The point is that if there was such a high degree of cultural and political admixture between the Slavs and their Avar, Bulgar, and especially Khazar (who made great efforts to cultivate international trading networks) neighbours, we must perforce expect a concomitant linguistic convergence. It should not come as any surprise, then, to see that these Asian languages exerted such a powerful influence on Slavonic, above and beyond mere lexical borrowing.

4.24 Summary

With the exception of lexical borrowing, it is often impossible to trace the origin of a grammatical process. All hope is not lost for a socio-historical examination of the evolution of Slavonic, though. What we have attempted is the isolation of macromechanical changes: certain overarching tendencies, which had a subsequent cascade effect through the structures of the language for a given length of time. Naturally, the more radical the change, or the longer the cascade, the more significant the linguistic event. The isolation of such important phenomena in space as well as time allows one to recouch the discussion of linguistic evolution in terms of the complimentary perspectives of a two-step evolutionary process and a model of punctuated equilibrium. Unless one wishes a purely abstract discussion and analysis, e.g. of the Generativist type, one must then turn to the external world for the ultimate cause of language change.

Much of the preceding section of this work was devoted to discussions of the phonology and lexicon at the expense of the morphological and syntactic structures of the language. The lexicon is the initial locus of change *par excellence*. We realize that this is a somewhat contentious assertion, and there are numerous competing views on the topic. However, logic would dictate that in terms of contact-induced change, whether due to convergence or outright language replacement, the first elements to penetrate the recipient language are often new words, and perhaps equally as often, new sounds.

We realize that this is a highly simplified and generalized schema; no doubt numerous alternatives to this could be suggested. To a large extent, the grammatical idiosyncrasies of the languages in contact will play a major role in the nature of any given linguistic change. Nevertheless, before a speaker can come to grips with the complexities of word-formation or syntax in a new language, simply mastering the sound system as encased in a new vocabulary takes precedence. Barring the parameters dictated by the typological concerns mentioned above, this hypothesis would seem to be the case regardless of whatever time period is under investigation (see §2.6).

Chapter 5: Conclusion

Our principal task in the preceding work was to discern the cause of the disintegration of the primordial Common Slavonic dialect. Although no substantial literary monuments survive directly attesting to the existence of this language, scholars have, over the past century, confidently reconstructed the language ancestral to the modern Slavonic tongues. This reconstruction is based on comparison with other languages of the Indo-European family, ancient and modern, as well as internal evidence from the Slavonic languages themselves, in the form of archaisms, relic forms, and datable lexical borrowings.

To review, during the course of our investigation, several questions arose. Was it possible to ascertain the cause or causes of the fragmentation of Slavonic linguistic unity, and to identify the motivations and mechanisms that influenced the evolution of these languages over the course of their history in the first place? If so, was it possible to extrapolate any principles applicable to linguistic evolution in general, once certain variables were taken into account? What were the significant variables, which affected the development of a language or group of languages?

It quickly became apparent that the majority of theories of language change did not adequately account for certain distinctive aspects of the history of Slavonic, especially if one adheres to Renfrew's theories regarding the Indo-Europeanization of

Western Eurasia. Most notably, one is at a loss to account for the fact that there were long periods of linguistic equilibrium, during which there was an absence of profound (macromechanical) linguistic change at work. Recent research by such scholars as Labov, Thomason, Croft, and the Milroys (to name only a few), has demonstrated quite convincingly that, both synchronically and diachronically speaking, languages reflect and react to the external, physical conditions affecting the people who speak them. As some authors of current theories of language change minimize the role of external influences on the evolution of a language, preferring instead to concentrate on internal, psychological mechanisms of language acquisition and evolution, their models cannot wholly explain the origins of change within a language.

Without denying the role that internal factors can play in the history of a speech community, we chose to examine more closely the nature and workings of external influences on language change. Croft provided an excellent framework for this sort of discussion: an Utterance-Based Theory of Selection. By using his theory, we were able to account for the origin and propagation of micromechanical changes within a speech community, emphasizing the role of language-in-use, simultaneously discarding other, overly abstract and formalistic theories of the origin of change within languages. This fulfilled a second function as well: the latitude to emphasize the impact of processes of macromechanical change on the evolution of languages. With certain modifications made to reflect the considerably increased time depth that an examination of the history of Slavonic entailed, it was this model which provided the theoretical foundation for this work, as detailed in Chapter 2. Because such a vast corpus of (mainly reconstructed) linguistic data pertaining to Slavonic was already

available, great care was required to ensure that we did not impose a pre-conceived theoretical model on the evidence, but rather tested the theory by means of the evidence.

The form that this test took was a concurrent examination of the history of the speakers of Slavonic and of the evolution of the language itself, and is found in Chapters 3 and 4. This enquiry in turn generated numerous problems. The most significant of these was the result of recent work in the fields of prehistoric European history and archaeology, and was essentially a direct challenge to the traditional interpretations of various ancient and medieval histories and chronicles and archaeological evidence. Consensus has been building among a growing group of scholars, led by individuals such as Renfrew, Diakonov, Gamkrelidze and Ivanov, and others that the conventional view of the history of the inhabitation of Europe, the Near East, and Central Asia, i.e. successive waves of migration, usually composed of warlike pastoralists from the steppes of Asia, was inaccurate. Specifically, such a model did not fully account for the introduction and establishment of the Indo-European languages from Ireland in the west to India and parts of western China in the east. As Goodenough emphasized, sound method in the study of prehistory entails both compatibility with the evidence and plausibility (253). Traditionally, this was thought to have occurred during the period of approximately 4000 BCE to 2000 BCE—the Bronze Age. The crux of their criticism was that there were simply not enough people to have carried out such a complete conquest of such a vast amount of territory in such a short amount of time (by Iron Age technological standards). The

identity of the speakers of Proto-Indo-European, the location of their ancestral territory, and the date of their expansion(s) became hotly debated topics.

The alternative proposed to the established theory of the IE occupation of Europe became known as the Demic Diffusion model. Renfrew, drawing not only on archaeological and linguistic sources, but also on material from fields such as genetics and human geography, advanced the theory that PIE was brought to Europe during the Neolithic period, some five or six millennia earlier than previously thought. The thrust of his argument was that the only event in the history of prehistoric Europe that could facilitate the spread of a language to almost every corner of the continent was the introduction of the agricultural lifeway, and one of its subsequent specializations, pastoral nomadism. (This came about as a result of a series of developments known as the Secondary Products Revolution, which occurred ca. 4000 BCE.)

The reason for this is that the advent of farming in Europe would have brought about a potential fifty-fold increase in the prehistoric population. Conversely, the cold and arid steppes of Central Asia could not support a population nearly as large. While archaeological evidence and ancient chronicles are rife with stories of migrations and invasions from the steppes, relatively few of these had any overt, lasting impact, either culturally or linguistically, across any great amount of territory. So, if the original Indo-Europeans were Bronze Age steppe nomads, they either invaded Europe in such great numbers that they completely inundated the indigenous

inhabitants, or they conquered territory that was largely vacant. The archaeological evidence indicates that neither of these was the case.

These matters have a direct bearing on the study of the history of Slavonic, which we addressed in the second half of Chapter 3. If the PIE-speaking forebears of the Slavs were present in Central and Eastern Europe at least five millennia earlier than previously thought, we must somehow account for their almost incredibly slow linguistic evolution, compared to that of some of their sister branches of IE, e.g. the Greeks, Indo-Aryans, and others. It is at this point that one can argue for the failure of current theories of language change; if change is dependent on incremental, inter-generational gaps caused by paucity of stimulus or other psychological processes, then it would seem logical to assume that over the course of eight to ten thousand years, i.e. the span of time covering the introduction of agriculture into Anatolia, and then to Europe up to the present, the modern-day IE languages would display a very low degree of resemblance to each other, and therefore to PIE itself.

The implication of this statement is that the history of a language consists of lengthy periods during which little or no significant change occurs, interspersed with episodes of rapid, generalized, and profound linguistic change. This was precisely the theory that Dixon proposed, borrowing the Punctuated Equilibrium Model from the natural sciences and applying it to the interaction of languages. But what of the source of these punctuation events? Dixon argued that historical events or processes, which caused an increase or decrease in the population of a speech community, or its

relocation, or the expansion of the language without a concomitant expansion of its 'carrier population' (such events are mirrored in the realm of culture, where technological or cultural innovations have been exported from donor to recipient populations), are a key source of punctuation events in the history of a language.

Dixon stopped short of arguing for a one-to-one correlation between historical events and episodes of linguistic punctuation. While we stand, in large measure, in agreement with this, it is our position that language reflects, both dynamically and directly, significant events in the physical world. When the ability of the Punctuated Equilibrium Model is combined with Croft's Utterance-based Theory of Selection as well as certain well-established sociolinguistic principles, e.g. the role of prestige in the preservation or rejection of linguistic innovations, what emerges is a persuasive theoretical model that is better able to account for both the origins and spread of linguistic innovations. External factors provided the actuation of change, and language-internal processes allowed their spread. In addition, from an areal perspective, this model is useful in accounting for convergence and advergence processes, e.g. those at work in transitional zones between speech communities.

Chapter 4 was an attempt to confirm of the validity of this model. In order to gain as broad a perspective as possible, we surveyed linguistic evidence that spanned the last ten millennia. We endeavoured to present detailed accounts of individual linguistic changes of significance, as well as discussion of general trends within each

phase of the history of the languages. What emerged were dynamic links between historical events and linguistic changes.

Notable examples of this phenomenon include the transition from a hunter-gatherer economy to an agricultural one, which we argued was reflected in the typological shift that marked the transition from Pre-Proto-Indo-European to Early Proto-Indo-European. The former was a language of either the Ergative or Active type, whereas the latter developed into a Nominative-Accusative language. Later, the dialectal divisions within the PIE community, e.g. *centum-satem*, were arguably results of the continued spread and consolidation of the IE tribes after the Secondary Products Revolution extended the geographical range of the Neolithic Revolution. Then, during the Late Bronze Age, the collapse of the cultures of 'Old Europe', to borrow Gimbutas' term, under increased demographic pressure, which was in turn likely aggravated by a temporary deterioration in the climate of the Central Asian steppes and south-eastern Europe was arguably the catalyst for the final disintegration of PIE linguistic unity. Moving into the Iron Age, the increase in instability continued sporadically, with the intrusions (corresponding to various combinations of Renfrew's Élite Dominance, Sedentary/Mobile Boundary Shift, System Collapse, and Constrained Population Displacement models) of Indo-European peoples into Central and Eastern Europe, e.g. the Cimmerians, Scythians, and Sarmatians from the steppes, or the Goths and Varangians from Scandinavia, followed by Finno-Ugric, e.g. the Magyars, and later Altaic cultures. Each of these scenarios facilitated a punctuation event in the history of Slavonic, although they did not all have the same degree or type of impact. In some cases, the influence was restricted to the lexicon, such that

only a few loanwords survive in the modern Slavonic languages. In other cases, the influence was both more subtle and profound, e.g. the influence of the Turkic Avars on the Slavonic languages discussed by Galton. As noted in Chapter 2, we argue in favour of a demonstrable catalytic relationship between historical events and processes and linguistic change (especially macromechanical changes).

To return then, to the initial chronology of the fragmentation of Common Slavonic, historical events played a key role in this. As a final note, to answer the questions raised in the preceding paragraphs of this conclusion, underlying the historical influences on the evolution of Slavonic are environmental factors. The climate and geography of Central and Eastern Europe played a significant role in effectively isolating the original PIE-speaking peoples and their later Slavic descendants for large portions of their history, resulting in lengthy periods of linguistic equilibrium. The Slav homeland, situated in the region of the North Carpathian mountains, and comprised of large tracts of forest and marshland, had the simultaneous effects of slowing population growth, as agriculture was more difficult to practice in this type of environment, and limiting mobility. The relatively high degree of linguistic conservatism evident in the Slavonic languages, echoed in the comparatively late entrance into the histories and affairs of the established European civilisations, both attest to this.

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