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European Philologies: Why Their Future Lives in Their Prehistoric Past

Francesco Benozzo & Mario Alinei

Abstract This article aims to explain, on the basis of more than 20 years of research, the essentially prehistoric nature of modern European philologies, According to recent research, in fact, the emergence of Indo-European people in Europe and Asia must be seen as one of the major episodes of the emergence of *Homo sapiens* in Europe and Asia from Africa, and not as an event of recent prehistory. Cumulative evidence shows a complete continuity between the Paleolithic hunters and the Indo-European population known from texts: Celts, Germans, Slavs. In archaeological and paleontological terms, the only observable break corresponds to the transition from the Middle Paleolitihc (*Neanderthal*) to the upper Paleolithic (*Cro-Magnon*), and it is from this moment onward that a history of languages and cultures develops in an autonomous way. The differentiation process of IE languages from the Proto-IE common language, reconstructed by comparative linguistics, as well as that of their already separated branches (Proto-Celtic, Proto-Germanic, Proto-Italic, Proto-Balto-Slavic, Proto-Greek etc.) into their presently 'substandard', 'dialect' varieties, must have taken an extremely long time, and they must have been associated first with the varying episodes of the original migration from Africa, and then – with an increasingly faster tempo as social stratification and colonial wars began – with the varying cultural, social and political stages the new fragmented groups went through in the different settlement areas.

Keywords national philologies as prehistoric philologies, stability of languages, Indo-European languages, Paleolithic Continuity Paradigm, Ethnophilology

It still happens to read in philological studies that Indo-European (IE) languages belong to lost layers of European linguistic history and that IE linguistics belongs to the so-called "sciences of our past". As any philologist should recognize, on the opposite, we still speak IE languages. To avoid any misunderstanding, and considering only modern state-official languages, there are 31 official IE languages in use in Europe at present: Albanian, Belorus, Bulgarian, Catalan, Czech, Danish, Dutch, English, Faroese, French, German, Greek, Icelandic, Irish, Italian, Latvian, Lithuanian, Luxembourgish, Macedonian, Norwegian, Polish, Portuguese, Romansh, Rumanian, Serbo-Croatian, Slovak, Slovenian, Spanish, Swedish and Ukranian (Ballester, 2015, pp. 153–154). This means that Romance philology, Germanic philology, Baltic philology, Slavic philology, and Celtic philology have to be

considered as branches of the same IE philology, in the same way that Italian dialectology is a branch of Romance philology.

In this article we would like to explain once again why the historical study of our living languages is actually a prehistorical one: in short, as IE languages emerged since Upper Paleolithic, European philologies are obliged to consider prehistory as the main field where they can epistemologically re-found themselves in a constant dialogue with the giant steps taken in the last decades by other disciplines.

1. The three reconstruction models for the origins of Indo-Europeans

1.1. *The traditional model: the Indo-European Calcholithic Invasion*

As is known, the received doctrine for the origins of IE in Europe was centered upon the idea – now called the 'myth' (Häusler, 2003) – of an Indo-European Invasion in the Copper Age (4th millennium B.C.), by horse-riding warrior pastoralists. The last and most authoritative version of this theory was the so called *kurgan* theory, elaborated by Marija Gimbutas, according to which the Proto-IE were the warrior pastoralists who built *kurgan*, i.e. burial mounds, in the steppe area of Ukraine (e.g. Gimbutas, 1970; 1973; 1977; 1980). From the steppe area, the Proto-IE *kurgan* conquerors would have then first invaded Southern Eastern Europe, then, in the 3rd millennium, after having evolved into the so called Battle Axe people, would have somehow erased most pre-existing languages, and brought IE languages all over Europe. By placing the arrival of the IEs in the 4th millennium, and the process of transformation from Proto-IE to separate language groups in the 3rd, the subsequent process, by which the separate language groups would evolve into the major attested languages, will inevitably take place in the II and I millennium that is in the Bronze and Iron Age. Although most IE specialists are still reluctant to admit it, this chronology, as well as the scenario behind it, can now be considered as altogether obsolete. The evidence collected by archaeology in the last thirty years, in fact, overwhelmingly prove the absence of any large scale

invasion in Europe, and the uninterrupted continuity of most Copper and Bronze Age cultures of Europe from Neolithic, and of most Neolithic cultures from Mesolithic and final Paleolithic.
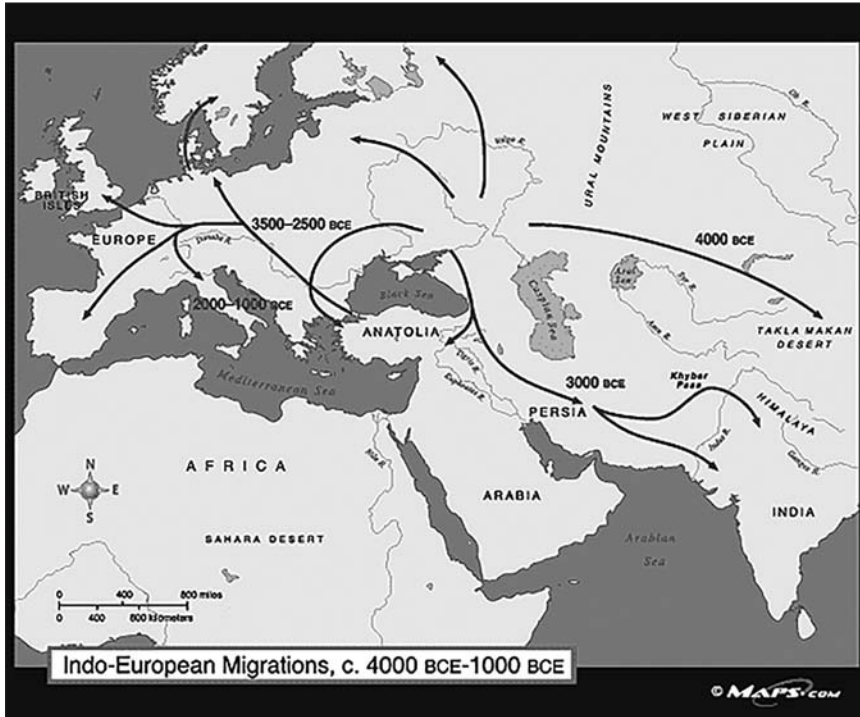
The mass invasion of IE warriors according to Marija Gimbutas

Archaeologists usually do not address linguistic issues. This is probably why, although firm conclusions about absence of invasions and cultural continuity already began to appear in the archaeological literature of the Seventies, historical linguists have continued to assume the traditional theory as an undisputed truth.

1.2. Renfrew's Model: the IE Neolithic Dispersal

In its famous *Archaeology and Linguistics. The IE puzzle*, published in 1987, the archaeologist Colin Renfrew did not limit himself to collect the

archaeological evidence now available to deliver the last fatal blow to the traditional theory, but presented a new theory of IE origins, called by its author the IE Neolithic Dispersal, which is based on the observation that the only moment in European prehistory which might coincide with a gigantic change such as the presumed indo-europeanization of Europe is the beginning of farming in the 7th millennium B.C. (see also Renfrew, 1999).

Moreover, since farming originated in the Middle East, and archaeology does detect in southern Europe a modest migratory contribution from that direction, associated with the introduction of farming, Renfrew has concluded that these early farmers were the Proto-Indo-Europeans, responsible for the introduction of IE in southern and central Europe, and that the subsequent IE dispersal started from these two areas, along with the dispersal of farming techniques. And since an intrusive contribution is especially evident in the two earliest Neolithic cultures of southern Europe, both dated to the 7th millennium, namely the Balkan complex and the Impresso/Cardial Ware in Western and Central Mediterranean, and to a lesser extent in the Linienbandkeramik (LBK) culture in Germany and Eastern Europe, dated to the 5th millennium, these cultures would represent the first introduction of IE into Europe.

The philosophy behind this theory is thus that the Proto-Indo-Europeans, far from being warriors who invaded and conquered Europe by sheer military force, are instead the inventors of farming, who conquered Europe by cultural and intellectual superiority. A philosophy which remains, in essence, eurocentric, even though the Proto-Indo-Europeans are now seen as the peaceful inventors of farming, instead of the warlike supermen of the traditional theory.
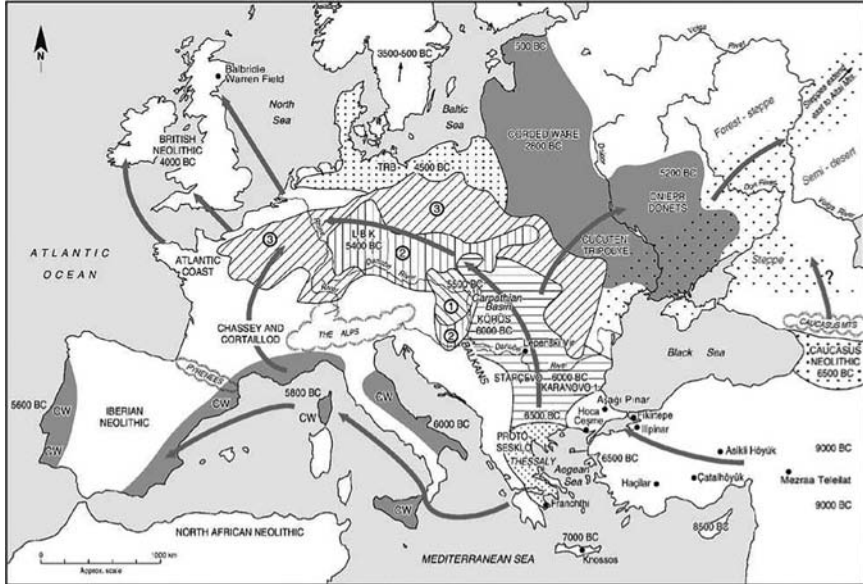
The earliest Neolithic cultures of Europe

Renfrew's book has unleashed a very lively international debate, which has been constantly growing, at the same time shifting its focus in response to growing objections. His theory, which owing to its focus on the Neolithic discontinuity can be called the Neolithic Discontinuity Theory (NDT), is undoubtedly superior to the traditional Invasion Theory, as far as it does eliminate the myth of the PIE *Blitzkrieg* against the peaceful Old Europeans. However, for the rest it creates more problems than it solves:

(1) Archaeology proves that most European Neolithic cultures directly continue earlier Mesolithic cultures, and even in those areas where intrusions are archaeologically ascertained, the Mesolithic populations were quickly involved in the acculturation process: there is no real discontinuity between Mesolithic and Neolithic (e.g. Zvelebil, 1986, Zvelebil & Dolukhanov, 1991).
(2) The two Southern European areas, where Neolithic cultures do show infiltrations from the Middle East, are precisely the areas where non-IE linguistic traits are most evident and important, as every linguist who is familiar with the linguistic record of ancient (and modern) Italy and Greece will readily admit. Which points precisely to the

contrary of what the NDT implies, namely that the South of Europe should have received the strongest influence from the PIE coming from the Middle East. To explain the real linguistic situation, in fact, the NDT assumption must be simply reversed: the Middle Eastern farmers introducing Neolithic into Southern Europe were precisely the non-Indo-European groups responsible for the non-IE element of the area.

(3) As far as the North and the West of Europe are concerned, the NDT is obliged to assume that IE 'arrived' there long after the first Neolithic cultures. However, that period is precisely the one in which archaeology detects no trace whatsoever of discontinuity: there is, for example, absolutely no trace of the 'arrival' of the Celts in Western Europe (which simply means that they were always there), and as to Germanic people, it is preposterous to think that the farmers of the LBK, Proto-Germanic according to the NDT, would be motivated to spread northward to Scandinavia and to Norway, would adopt the Mesolithic fishing tools and deep-sea fishing techniques and habits of the rich Mesolithic specialised fishing cultures of that area, without adopting, however, any part of their fishing terminology, and especially without adopting any their place names: the whole Scandinavian toponymy is either Germanic or Uralic! Obviously, the convergence between the continuity of Northern peoples, fishing cultures and technologies, and the Germanic or Uralic character of terminologies and place names point to continuity of language, just as it does in the Uralic area.

(4) As we have shown in a number of publications (see bibliography), there is just no way to reconcile the semantic history of innumerable IE words, and their chronological implications, with the NDT scenario. Any thorough and unbiased analysis of the rich IE record points to a Paleolithic depth for the earliest layers of the PIE vocabulary, and to a very early, Upper Paleolithic and Mesolithic linguistic differentiation of Proto-Indo-Europeans. This is the reason why the IE Neolithic terminology, as admitted even by traditional scholars (Villar, 1991, p. 81), is neatly differentiated from group to group: a fact that clashes against the very idea of the Indo-Europeans as inventors of farming (idem).

1.3. The Paleolithic Continuity Paradigm (PCP)

The main points of the PCP on the origins of the Indo-Europeans (cf. ‹www.continuitas.org›), as well as on language origin and evolution are the following:

1.3.1. Continuity as the basic working hypothesis on the origins of IE languages

If the demonstration of continuity, as James Mallory has had to admit, is "the archaeologists' easiest pursuit" (Mallory, 1989, p. 81), then it follows:

(1) that also for the question of European origin, the easiest working hypothesis is the continuity model, and no other alternative;
(2) that consequently the burden of proof now lies on the (Chalcolithic or Neolithic) invasionist's shoulders, and not on the anti-invasionist's;
(3) that as long as no alternative theory provides irrefutable counter-evidence, the Paleolithic Continuity can be considered as the winning theory.

1.3.2. Antiquity and stability of language and languages, in general

Language and languages are much more ancient than traditionally thought. Consequently, also the record of their origins, change and development must be mapped onto a much longer chronology, instead of being compressed into a few millennia, as traditionally done, and as the NDT also obliges to do. While traditional linguistics, by reifying language, had made *change* into a sort of biological, organic law of language development, the extraordinary tempo of it would fit the short chronologies of the recent invasion or of the earlier Neolithization, the new, much longer chronologies of language origins and language development impose a reversal of this conception: *conservation* is the law of language and languages, and change is the exception, being caused not by an alleged 'biological law of language', but by major external (ethnic or social) factors, i. e. by language contacts and hybridization, in concomitance with the major ecological, socio-economic and cultural events that have shaped each area of the globe.

1.3.3. Antiquity and periodization of the lexicon of natural languages

An important corollary of this new conception and new chronology of language origins and development is that the emerging and formation of the lexicon of all world language phyla and their groups, including of course Indo-European, should be 'periodized' along the entire course of human evolution, and not compressed in the recent prehistory, as typical of the traditional theory as well as of the NDT. Here are some examples of this lexical periodization applied to IE:

(1) The Proto-IE lexicon, i.e. the lexicon common to all IE languages, which includes among other things grammatical words such as personal pronouns, WH- words and the like, forms by definition its earliest layer. As such it ought to be placed in the depth of Paleolithic, and be seen as reflecting the awakening and developing of human conscience and cultural activities of an already separated and independent language phylum. In fact, the differences in the lexicon of the grammatical structure shown by most language phyla should suffice to disqualify as meaningless any research aiming at reconstructing a universal monogenetic lexicon (cf. e.g. Ruhlen, 1994).

(2) If IE words for 'dying' (coming from PIE *-mer) belong to the PIE lexicon, while for 'burying' there are different words in most IE languages, this must be seen as evidence that by the time ritual burying began, in Upper Paleolithic, IE groups were already differentiated.

NAMES FOR 'DIE' AND 'BURY'

MIDDLE/LOWER PALEOLITHIC
Common IE *mer- 'die'
BEGINNING OF RITUAL BURIAL IN UPPER PALEOLITHIC
Grk. *tápto*; Lat. *sepelīre* OIr. *adnaicim*; Swed. *jorda*; Engl. *bury*; OIcel. *grafa*; OSlav. *pogreti*; Lith. *(pa)laidoti, pakasti*; Latv. *aprakt, apbedīt* etc.,   all 'bury'
Most IE languages show different words also for 'grave' and 'cemetery'

Similarly, if the name of several wild animals, among which that of the bear (PIE *rkÞo-s*), belong to the PIE lexicon, this means that these animals belonged to the cognitive and cultural world of IE pre-religious Paleolithic hunters. Conversely, the so called 'noa' names of the bear (i.e replacing the tabooed real one) in the Celtic, Germanic, Baltic and Slavic languages, all different from one another, can only indicate that by the time religious concern for hunted animals connected with totemism emerged in Upper Paleolithic (along with the earliest attestations of bear cult), IE languages were already differentiated.

<div style="text-align:center">NAMES OF 'BEAR'</div>

MIDDLE PALEOLITHIC:

     Common IE *rkÞo-s* 'bear' (cp. Lat. *ursus*, Grk *árktos* etc.).

FIRST ATTESTATIONS OF BEAR CULT
IN UPPER PALEOLITHIC:

DIFFERENT NOA NAMES OF 'BEAR', REPLACING THE TABOOED ONE:
     Germanic 'brown': OIcel. *bjorn*, Dan. *bjørn*, Swed. *bjorn*, AS. *bera*, Engl. *bear*, OHG. *bero*, *bär*, Du. *beer*;
     Slavic 'honey eater': OSlav. *medvjed*, Cz. *medved*, Pol. *niedzwiedz*, Russ. *Medved'*, (> lit. *meška*);
     Baltic probably 'hairy': Lith. *lokys*, Latv. *lacis*, OPruss. *clokis*;
     Celtic 'good calf': OIr. *mathgamain*, Ir. *mathghamhain* (from *maith* 'good' and *ghamain* 'calf').

Different noa names of animals, different 'totemic' names for animals, different zoomorphic names for natural and human phenomena also in most European substandard dialects.

(3)   Also words for typical Mesolithic inventions, such 'bow', 'tar', fishing tools, carpentry and many others, are different in each IE group, proving that by Mesolithic time IE languages were already differentiated.

<div style="text-align:center">NAMES OF 'TAR'</div>

MESOLITHIC: BEGINING
OF TAR PRODUCTION FROM TREES,
AND DIFFERENT NAMES OF TAR:

Germanic: Engl. *tar*, Germ. *Teer*,
Du. *teer*, Dan. *tjære*, Swed. *tjära*,
Norw. *Tjøra* 'tar' (> Finn. *terva*.) etc;
OIcel. *tjorr* 'wooden haft glued to a weapon':   **< Germ. *ter* 'tree'**

Latin *pix*, *picis* 'pitch':   **< Lat. *pinus* 'pine'**

Celtic *bitumen* 'tar':   **< Celt. *betulla* 'beech'**

(4) The sharp differentiation of farming terminology in the different IE languages, while absolutely unexplainable in the context of Renfrew's NDT, provides yet another fundamental proof that the differentiation of IE languages goes back to remote prehistory. This is admitted even by a few traditionalists: as Francisco Villar writes, "in the common [Indoeuropean] language a lexicon connected to farming does not exist or hardly exists" and "the common IE terminology for farming is so scarce to allow a dilemma to rise: it is possible that the IEs' knowledge of farming was modest, […] but it is even possible that they had no knowledge of farming at all" (Villar, 1991, p. 81). While this finding can be easily explained within the PCP, it becomes a huge problem once Neolithic intrusive farmers have been assumed to be the Proto-IEs: "This hypothesis clashes with the Neolithic thesis […] according to which IEs would essentially be the inventors of farming, which would be the most important and characteristic activity of their society", and "It is unthinkable that the people who invented and diffused farming would not have a rich and specific lexicon to designate the elements and the techniques of farming" (*ibidem*).

1.3.4. *Archaeological frontiers coincide with linguistic frontiers*

The existence and the stability or mobility of frontiers between prehistoric cultures, in the different periods of prehistory, is clearly demonstrated, more than by any argumentation, by archaeological chrono-stratigraphical charts (initiated, as is known, by Gordon Childe (Childe, 1925–1957, Burkitt - Childe, 1932). These charts can be of significant help to historical linguists because:

(i)   Depending on their chronological depth, importance and stability, these cultural frontiers can now be seen as corresponding to linguistic-family frontiers, to linguistic-group frontiers, to dialect frontiers.

(ii) The various geographical sub-areas indicated by the columns of an archaeological chart are not chosen subjectively, but their delimitation is self-generated, i.e. 'governed' by the very specific and exclusive sequence of cultural development, which shapes –as it were– each sub-area, identifying and distinguishing it from the others.

(iii) Each cultural sequence, corresponding to a given geographical sub-area, has thus a very distinct and strong cultural *identity*, which could easily be connected, depending on the period and the area involved,

with a language family, a language group, or a dialect group. If, for example, the Neolithic Cardial Ware can be seen as corresponding to an already differentiated Italid group, each of its later sub-areas can be interpreted as representing a kind of 'dialect' differentiation from the same common 'language'. The same can be said for the LBK in Germany, and for similar large cultural units in other areas.

(iv) As far as Europe is concerned, the picture revealed by these charts, already evident as soon as the archaeological record permits adequate geographical mapping of cultures (i.e. in the late Paleolithic and Mesolithic), is one of the formation of large ethnolinguistic cultural 'orbits'. This picture continues also in the early Neolithic, until, beginning in the course of Neolithic, and steadily increasing in the Metal Ages, a fragmentation of each original 'orbit' takes place. Some periods of frontier shifting and transitional discontinuity, which are caused by the transitory expansion of elite groups in the late Metal Ages, usually come to an end in subsequent developments, with the reappearing of the previous frontiers.

All of this seems to correspond quite closely with what we should expect if one or more populations speaking one and the same language –such as the Proto-Indo-Europeans or the Proto-Uralic people– had first spread to Europe from Africa, and then had broken up into different groups (cultural 'orbits'), as a result of their exposure first to different ecological niches, different social networks and different neighbors, then to waves of intrusive immigrants introducing agriculture and stock-raising in Neolithic, and later, in the Metal Ages, when stratified societies develop, to waves of invading elites of akin or distant groups, speaking cognate or foreign languages.

As examples one can mention here:

(I) the linguistic-phylum frontier between Uralic and IE in the Baltic area coincides with the extremely stable Latvian frontier separating, from Mesolithic to Chalcolithic, the Kunda, Narva, Pit-and-Comb Ware cultures of the Uralic-speaking area in the North, from the Nemunas 1, Nemunas 2, Globular Amphora, Corded Ware/Boat Axes and Bay Coast cultures of the IE, Baltic-speaking area in the South (only at the end of Neolithic, the non-Uralic Bay Coast culture spreads to Estonia, but only to be soon reabsorbed by the local Uralic culture.).

(II) The language frontier between French and German in Alsace co-
      incides with the stable archaeological frontier separating the Ne-
      olithic and Chalcolithic cultures of Chassey, Michelsberg, SOM,
      Vienne-Charente, etc. of the Celtic (now French-speaking) area,
      from those of the LBK, SBK, Hinkelstein, Grossgartach, Rössen
      cultures etc., of the now German-speaking area.

(III) The complex of language and dialect frontiers in the Western Alps,
      respectively between German and Neo-Latin in Switzerland, between
      Franco-Provençal and *oïl* in Switzerland, between Franco-Provençal
      and Occitan in France and Italy, and Gallo-Italic in Italy, coincide
      with the frontiers separating, in the different Alpine areas, the Car-
      dial/Impresso-derived cultures of the Italid-speaking area from the
      LBK-derived cultures in Germanic Switzerland. More precisely: on
      the one hand Cortaillod corresponds closely to the Franco-Provençal
      dialects, Chassey to Occitan, Lagozza to Gallo-Italic dialects; on
      the other Pfyn and Rössen corresponds with the Alemannic, Swiss-
      German dialect area. Moreover, on the Ligurian coast and the Pied-
      mont Alps, the frontier between Occitan and Gallo-Italic dialects cor-
      responds to the prehistoric frontier between Chassey and the VBQ
      culture of the Po Valley.

(IV) On the steppes of Eastern Europe, a conspicuous and well-known
      Neolithic-Chalcolithic frontier separates the farming cultures of
      Bug-Dnestr, Tripolye AI, Tripolye AII, Gorodsk-Usatovo, Corded
      Ware and Globular Amphora in Ukraine, from the pastoral, horse-
      raising and horse-riding cultures of Sursk-Dnepr, Dnepr-Donec,
      Seredny Stog/Chvalynsk, Yamna (*kurgan*!) and Catacombs, in the
      Pontic steppes: this is the frontier that moved Marija Gimbutas to
      envisage the epochal clash between the peaceful autochthonous
      non-IE farmers of the "Old Europe", and the warlike intrusive IE
      who submerged them. In the light of the PCP and of the available
      linguistic evidence, instead, this frontier corresponds to an earlier
      linguistic phylum frontier between an already separated and flour-
      ishing eastern Slavic population of farmers to the West, and war-
      like Turkic pastoral nomadic groups to the East, which would be
      responsible, among other things, of the two innovations of horse
      raising and horse-riding.

      Linguistically, the new interpretation has the advantage of explain-
      ing (A) the antiquity and the quantity of Turkic loanwords precisely

for horse terminology in both branches of Samoyed, in the Ugric languages, as well as in Slavic languages, and (B), more generally, the quantity of Turkic agro-pastoral terms in South-Eastern European languages, including Hungarian, which would have been brought into its present area precisely by the *kurgan* culture.

Interestingly, the uninterrupted continuity of Altaic steppe cultures, from Chalcolithic to the Middle Ages, can be symbolized precisely by the *kurgan* themselves: for on the one hand, the custom of raising *kurgans* on burial sites has always been one of the most characteristic features of Altaic steppe nomadic populations, from their first historical appearance to the late Middle Ages. On the other, the Russian word *kurgan* itself is not of Russian, or Slavic, or IE, origin, but a Turkic loanword, with a very wide diffusion area in Southern Europe, which closely corresponds to the spread of the *kurgan* culture.

Notice that this phylum frontier between IE (Slavic) and Turkic in the course of history has been pushed to the East, leaving however Turkic minorities, as well as innumerable Turkic place names and other linguistic traces behind.

(V) In a series of studies (see bibliography) we have shown how the linguistic record confirms the importance of the Celtic role in the diffusion of fishing terms in the whole of western Europe, a diffusion that must have taken place during Mesolithic. In the Neolithic, starting with megalithism, and later with the Beaker Bell culture (another fundamental Celtic contribution to European development), Celts mixed also with other Indo-European groups, and in such a measure as to determine important phenomena of hybridization, as demonstrated by the linguistic phenomenon of consonantal lenition, which appears not only in the Italid area (Iberian, Gallo-Romance, Gallo-Italic, Sardinian and Corsican), but also in the Germanic area and in Poland, and the area of which closely resembles that of Megalithism.
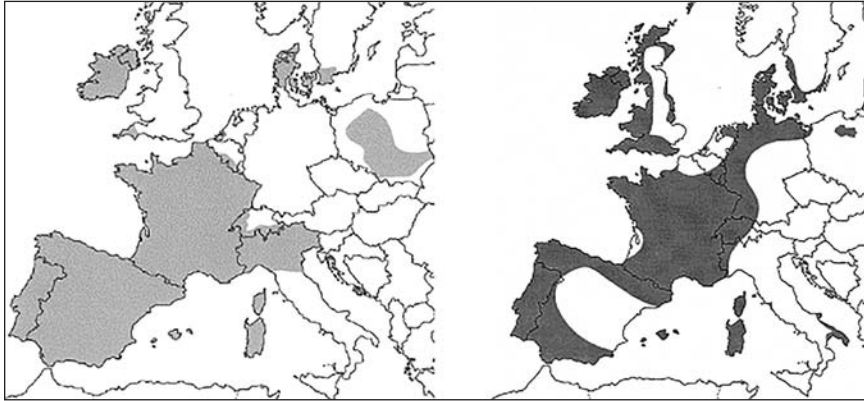
On the left: the area of lenition; *on the right*: the area of megalithism

2. The interdisciplinary survey of converging conclusions on the problem of the origin of language and languages

The PCP of IE origins reconcile the still fundamental conquests of traditional historical and comparative linguistics – inevitably neglected by Renfrew and his team – with the conclusions reached by modern sciences and disciplines. And in recent times at least five different sciences and disciplines have addressed the problems of the origin of language in general and of languages in particular: (i) general linguistics and, more specifically, psycho- and cognitive linguistics, (ii) paleo-anthropology, (iii) cognitive science, (iv) genetics and (v) archaeology. Though they have done it from different vantage points and with different approaches, they have reached conclusions that seem to show a remarkable convergence. It is thus on these converging conclusions that a new theory of IE (and language) origins ought to be founded.

2.1. *General linguistics, Psycholinguistics, Cognitive linguistics*

In general linguistics, the central idea of Noam Chomsky's revolutionary theory on the psychological and formal foundations of language is centered

upon the claim that *language is innate*. Until recently, this claim formed a major obstacle for the integration of his theory in a Darwinian, evolutionary framework. A major breakthrough, however, independently made by scholars specialized in different sciences (see the following points), has provided an unexpected solution for this problem.

2.2. Paleoanthropology

Benozzo (2016a; 2017) has indicated four linguistic elements of deductive evidence which bring to the following conclusions:

(1) *Homo* was born *loquens* (2.5 million years ago);
(2) languages appeared with *Homo* himself;
(3) language existed much earlier on (before 2.5 million years ago), with *Australopithecus*.

This claim has been reinforced by paleoanthropological elements listed by Marcel Otte, and a book (titled *Speaking Australopithecus*) has been published on the subject (Benozzo - Otte, 2017a; 2017b; the only published review of this book until now, the one written by Professor Dario Seglie, Director of the Study Centre and Museum of Prehistoric Art in Pinerolo and Liaison Officer of UNESCO, is a fully positive one: cf. Seglie, 2017).

2.3. Genetics

In genetics, the school founded and led by Luca Cavalli Sforza has made fundamental discoveries about the relationship between genetics and linguistics, such as:

(A) the areal distribution of genetic markers largely corresponds to that of the world languages (Cavalli Sforza *et al*., 1988; 1994);
(B) language differentiation must have proceeded step by step with the dispersal of humans (probably *Homo sapiens sapiens*) (*ibidem*).
(C) Independent geneticists working on DNA have recently ascertained that that 80% of the genetic stock of Europeans goes back to Paleolithic (e.g. Sykes, 2001; 2006).

Despite these conclusions, for the specific problem of the origins of Indo-European languages Cavalli Sforza has first tried to adjust his data to the traditional model of the warlike invasion theory, claiming that the two data converged, and later has done the same with Renfrew's model (Ammerman - Cavalli Sforza, 1984). Nevertheless, he has recently had to surrender to the latest outcome of genetic research, i.e. that 80% of the genetic stock of Europeans goes back to Paleolithic (Sykes 2001, 240 ff). As Bryan Sykes' has recently commented: "The Neolithic farmers ha[ve] certainly been important; but they ha[ve] only contributed about one fifth of our genes. It [is] the hunters of the Paleolithic that ha[ve]created the main body of modern European gene pool" (Sykes, 2001, p. 242).

In a book devoted to the genetic stock of Great Britain and Ireland, Sykes writes, again: "I can see no evidence at all of a large scale immigration from central Europe to Ireland and the west of the Isles generally, such as been used to explain the presence there of the main body of 'Gaels' or 'Celts'. The 'Celts' of Ireland and the Western Isles are not, as far as I can see from the genetic evidence, related to the Celts who spread south and east to Italy, Greece and Turkey from the heartlands of Hallstatt and La Tène in the shadows of the Alps during the first millennium BC. The people of the Isles who now feel themselves to be Celts have far deeper roots in the Isles than that and, as far as I can see, their ancestors have been here for several thousand years" (Sykes, 2006, p. 281). This conclusion perfectly fits with the PCP interpretation of Celtic ethnogenesis (see § 4).

2.4. *Archaeology*

In the last four decades, archaeological research has made quite a few revolutionary advances, among which the most well-known is the much higher chronologies of European prehistory, obtained by radiocarbon and other innovative dating techniques. However, as far as our topic is concerned, the conclusion that interests us the most –and which we have already mentioned – are:

(A) there is absolutely no trace of a gigantic warlike invasion, such as to have caused a linguistic substitution on continental scale, as envisaged by the traditional IE theory; and

(B) all Neolithic cultures of Europe either are a direct continuation of Mesolithic ones, or have been created by Mesolithic groups after their Neolithization by intrusive farmers from the Middle East.

So that, again, a language substitution of the imagined scale would be altogether unlikely. There is, instead, every possible evidence for demic and cultural continuity, from Paleolithic to the Metal Ages. Continuity is now universally considered the basic pattern of European prehistory. As already said, even James Mallory, probably the last archaeologist who defends the IE invasion theory, has had to concede: "the archaeologists' easiest pursuit [is] the demonstration of relative continuity and absence of intrusion" (Mallory, 1989, p. 81).

3. Two more contributions on the solution of the problem

To the five conclusions we have summarized, two more contributions on the solution of the problem of IE languages can be added: the so called Uralic Continuity theory, in so far as it provides an illuminating parallel for our case; and research on history of archaeology, linguistics and ideology, in so far as it explains why the founders of IE studies were motivated to create the myth of a recent invasions of Neolithic Europe by superior IE warriors.

3.1. The Uralic Continuity Theory

In the last 40 years, there has been an important breakthrough in the history of European origins, which only recently has begun to attract the attention of specialists of other areas. This is the so called Uralic Continuity Theory (in Finnish: *uralilainen jatkuvuusteoria*), developed in the Seventies by archaeologists and linguists specialised in the Uralic area of Europe, that is the area of Finno-Ugric and Samoyed languages. This theory claims an uninterrupted continuity of Uralic populations and languages from Paleolithic: Uralic people would belong to the heirs of *Homo sapiens sapiens* coming from Africa, they would have occupied mid-eastern Europe in Paleolithic glacial

times, and during the deglaciation of Northern Europe, in Mesolithic, would have followed the retreating icecap, eventually settling in their present territories (Meinander, 1973; Nuñez, 1987; 1989; 1996; 1997; 1998).

The relevance of this theory for our problem lies in the following points:

(1) it replaces an earlier 'invasion theory', quite similar to the traditional IE one, and practically modelled on it.
(2) It represents the first claim of uninterrupted continuity from Paleolithic of the second European linguistic phylum, thus opening the way to a similar theory for IE.
(3) It is now current not only among specialists of Finno-Ugric prehistory and of Finno-Ugric languages, but has become part of the general culture in all countries where Uralic languages are spoken.
(4) It obliges to question the validity of the until now accepted chronology for the innumerable Uralic loanwords from contiguous IE and Turkic languages.

There is thus every reason to advance a similar theory for the major linguistic phylum of Europe.

3.2. History of ideas

Many recent studies have shown that the foundation of scientific IE research in the 19th-century was deeply influenced by the contemporary Arian, Pangermanic and colonialist ideology, as first expounded in Count Joseph-Arthur De Gobineau's, *Essai sur l'inégalité des races humaines* (1853–1855) and Houston Stewart Chamberlain's, *Die Grundlagen des XIX Jahrhunderts* (1899), with their emphasis on Indo-Europeans racial superiority and their inclination to war and conquest (e.g. Poliakov, 1974; Römer, 1985; Trigger, 1989, Renfrew, 1987 etc.).

Here is, for example, how Adolphe Pictet, the founder of the so called Linguistic Paleontology, in his book *Les origines des Indo-européennes ou les Aryas primitif. Essai de paléontologie linguistique*, Paris, 1859–63, described the "Arian race": "a race destined by the Providence to dominate the whole world… Privileged among all other races for the beauty of its blood, and for the gifts of its intelligence, … this fertile race has worked to create for itself, as a means for its development, a language which is admirable for its richness, its power, its harmony and perfection of forms".

In short, the first IE specialists – imbued with European colonialism of the 19th century - chose to see the Proto-Indo-Europeans as a superior race of warriors and colonizers, who would have conquered the allegedly "pre-IE" Neolithic Europe in the Copper Age, and brought their 'superior' civilization to it. Moreover, since it was necessary for the Indo-European warriors to have weapons and horses, also the choice of the Copper Age was obligatory, because this was the context of Battle Axes, metallurgy and horse riding. At the same time, while the concept of the Arian super-race gave shape to the myth of the Battle-Axe horse-riding invaders, another myth, within the Arian larger myth, emerged: Pangermanism. Within the Arian superior race, the German father-founders of IE studies saw the Germanic people as the supermen, the purest and the closest to the original blessed race, and chose the Germanic area as the Urheimat of the Proto-Indo-Europeans.

After WW2, with the end of Nazi ideology, a new variant of the traditional scenario, which soon became the new canonic IE theory, was introduced by Marija Gimbutas, an ardent Baltic nationalist: the PIE Battle-Axe super-warriors were best represented by Baltic élites, instead of Germanic ones (Gimbutas, 1970; 1973; 1977; 1979; 1980).

Interestingly, also the central idea of the NDT, namely that the inventors of farming were the Indo-Europeans, rather than the 'real' Middle-Eastern, Sumerian and/or Semitic, people, is yet another vein of this often unwitting ethnocentrism that runs through the history of research on IE origins.

4. The main lines of the PCP historical reconstruction

Summarizing, the fundamental lines of the PCP historical reconstruction are:

(1) The 'arrival' of Indo-European people in Europe and Asia must be seen as one of the major episodes of the 'arrival' of *Homo sapiens* in Europe and Asia from Africa, and not as an event of recent prehistory. As Marcel Otte writes, "from the strictly archaeological point of view, the fringes of the European continent retrace a phenomenon of complete continuity between the last hunters and the most authentic Indo-European population known from texts: Celts, Germans, Slavs.

[…] The only true break visible in terms of archaeology and human paleontology (and hence of ethnic groups) corresponds to the transition from the Middle Palaeolitihc (*Neanderthal* Man) to the upper Palaeolithic ("Modern" or *Cro Magnon* Man). It is from this moment onward that a history of cultures develops on this continent in an autonomous way. It is also from this moment that continuity begins and lasts until protohistory. It is also from this moment that the non-Indo-European peoples appear as a stark contrast against this communal background: Finno-Ugric speakers or Turco-Mongols" (Otte, 1997, p. 80).
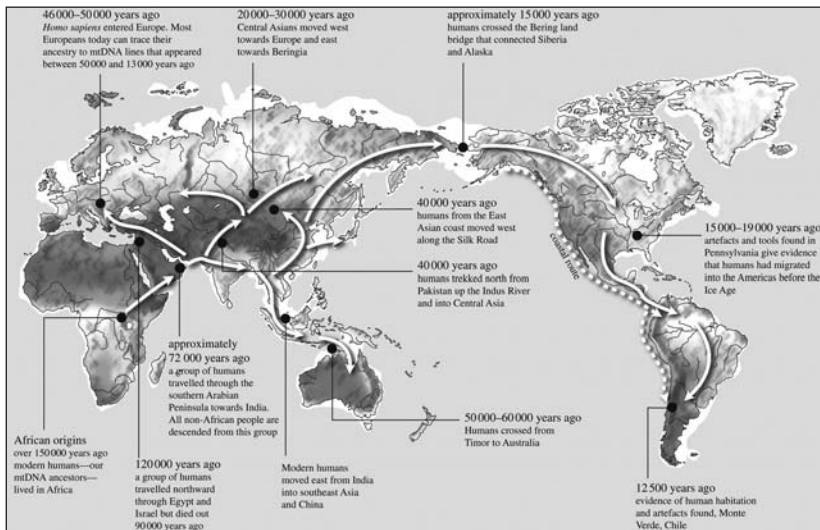
Map of modern human dispersals, as reconstructed in Oppenheimer, 2012.

(2) The differentiation process of IE languages from the Proto-IE common language, reconstructed by comparative linguistics, as well as that of their already separated branches (Proto-Celtic, Proto-Germanic, Proto-Italic, Proto-Balto-Slavic, Proto-Greek etc.) into their presently 'substandard', 'dialect' varieties, must have taken an extremely long time, and they must have been associated first with the varying episodes of the original migration from Africa, and then – with an increasingly faster tempo as social stratification and colonial wars began – with the varying cultural, social and political stages the new fragmented groups went through in the different settlement areas.

For example:

(a) The 'mysterious arrival' of the Celts in Western Europe, obligatory in the traditional theory as well as in the NDT – is replaced by the scenario of an early differentiation of Celts, as the westernmost IE group in Europe. Western Europe must of course have always been Celtic, and the recent prehistory of Western Europe – from the Megalithic culture through the Beaker Bell to the colonialistic La Tène – must have all been Celtic. Consequently, the duration of the colonial expansion of the Celts was much longer than thought, and its direction was from West to East and not vice versa. In addition, following Benozzo (2018), one should consider that the haplogroup R1b (Last Glacial Maximum / 26,500–19,000 years ago) – identified in the remains of a 24,000 year-old boy belonging to a tribe of mammoth hunters (Myres *et al.*, 2011) – belongs to a Paleolithic population which appears to have contributed mostly to the ancestry of modern Europeans and South Asians, and that the Atlantic area – in particular Galicia and Brittany – maintains the highest density of R1b and must then be identified with the area where it originated (Lucotte, 2015).
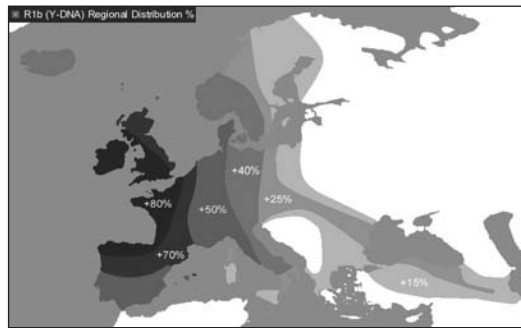
Distribution of R1b haplogroup

(b) The extremely successful (and sedentary) Mesolithic fishing cultures of Northern Europe must be attributed to already differentiated Celts, Germanic people and Balts, besides to Uralic people.

(c) The continental Germanic area must have extended, before the deglaciation, from the Alps to the icecap, including what are now the Frisian islands and part of the British islands. After the deglaciation, in Mesolithic, it expanded to Scandinavia (where its earlier, 'Mesolithic'

stage is still best preserved), and its first Neolithic appearance was the LBK. While the conspicuous fragmentation of the LBK, caused by the complexity of the recent prehistory of the area, is reflected by the rich dialect picture of Germany and of the contiguous Germanophone countries, the much simpler prehistory, and the completely different geographic context of Scandinavia, made it possible for much of the language original characters to be preserved.

(d) What is now called the Romance area – closely corresponding to the area of the Epigravettian Paleolithic culture, of Mesolithic cultures such as Castelnovian and Sauveterrian, and of the Impresso/Cardial culture of Neolithic – Instead of representing solely the remnant of Roman imperialism, must now be seen as mainly an original Italid (or Italoid, or Ibero-Dalmatic) linguistic area, in which several proto-languages akin to Latin, besides Latin and the other Italic languages, were spoken, and for the speakers of which the Latin of Rome must have been an (easy to learn) superstrate. Rumanian appears to be an intrusive language, introduced in Neolithic times into the Slavic area by Impresso/Cardial farmers coming from Dalmatia (Hamangia culture).

(e) The totally absurd thesis of the so called 'late arrival' of the Slavs in Europe must be replaced by the scenario of Slavic continuity from Paleolithic, and the demographic growth and geographic expansion of the Slavs can be explained, much more realistically, by the extraordinary success, continuity and stability of the Neolithic cultures of South-Eastern Europe (the only ones in Europe that caused the formation of *tells*).

Future research will enhance and confirm these conclusions, as well as open new vistas on our past. Future European philologies will find new directions and new innumerable data by acknowledging their status of prehistoric philologies.

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