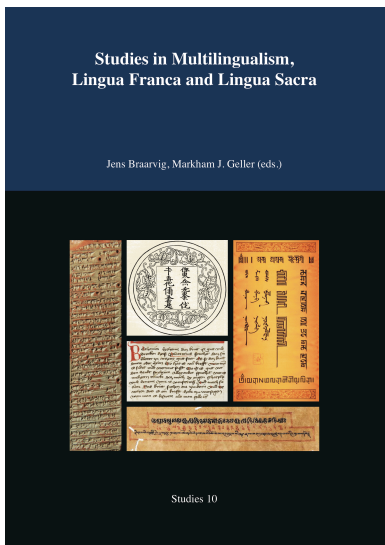# Max Planck Research Library for the History and Development of Knowledge

Studies 10

Jens Braarvig:

Dependent Languages

Chapter 2
Dependent Languages
Jens Braarvig

The diffusion of knowledge is intimately connected with a given lingua franca in the way that the language of empires and concentrations of power (which require a lingua franca) absorb the knowledge resources within their dominions in a periphery-center movement. A lingua franca disperses formalized knowledge systems by way of translation into the languages of associated and nearby cultures by an opposite center-periphery movement. Thus, a written and spoken lingua franca influences other languages and produces multilingual cultures.

In the relative stability of an empire, and with necessary material resources, knowledge production thrives within the medium of the lingua franca for purposes of government, trade, science, religion, and indeed military expertise, to expand and keep surrounding peoples appeased within stable borders. Thus knowledge spreads throughout history by conquest and war, as well as by trade and immigration, including that of soldiers and craftsmen. Diplomatic as well as religious missions also have a long history of communication on a high level and are conducive to cooperation. The diffusion of knowledge always involves the creation of equivalent systems of words in spoken or written language, as well as symbol systems such as numbers and more elementary symbols for communication. Transfer and translation of knowledge also involves, for pragmatic or aesthetic reasons, objects that carry with them the technology that created them. Thus they represent the knowledge behind their production.

Documents and written records (religious, scientific, political or commercial) are the vehicles for the dissemination of knowledge. They are the natural objects of study for understanding problems connected with the creation of new concepts in a receiving language, and the concomitant diffusion of knowledge. A lingua franca can assimilate into a "local" language through translation, as well as the converse, that is, a text from a "local" language being translated into a lingua franca, or, thirdly, written knowledge can be transferred from one lingua franca to another. All these situations involve multilingualism, since a given lingua franca is employed to bridge the various languages dependent on it, in order to communicate between languages within the areas dominated by a regime or empire, often from where the lingua franca originated. Many of the most important literary works are legitimized through a lingua franca, while being translated into non-lingua franca languages.

Before the advent of modern printing technologies, producing books was a costly undertaking. There was no market for selling books, and the production of complex written materials remained the concern of government and religious institutions. However, certain kinds of less complicated texts, such as personal letters and simple economical documents (including trade agreements and accounts), were produced by individuals at low cost. Translations were mostly undertaken by means of institutional organizations. In this way, it is only after the Renaissance that book production could rely on a market, where books were bought,

though mostly by the wealthy, and it is only in the last two centuries that mass diffusion of translated books has increased greatly, and the globalization of knowledge was enhanced and made possible through the many new routes of communication by sea. Trade and the exchange of goods produced new lingua francas, originally national languages of the nations developing their domain. This in turn gave impetus to translation activities, to accommodate the knowledge resources of the center as well as in the periphery. The most important post-Renaissance examples of new lingua francas were Turkish and Persian, Venetian, Portuguese and Spanish, French and English, and more recently Russian, although German could also qualify as a lingua franca of science in the nineteenth and the first half of the twentieth century.

The processes of knowledge diffusion before the Renaissance are simpler to describe due to the relative paucity of written materials as well as the smaller number of languages qualifying as a lingua franca. The most influential pre-Renaissance examples of lingua francas are surprisingly few; in historical order, Sumerian, Akkadian, Phoenician (to a limited extent), Aramaic, Syriac, Greek, Latin, and finally Arabic in the Near East and Mediterranean, as well as Sanskrit and Chinese in the Far East. We see that those mentioned first have a certain historical continuity and a dependency on those that preceded them. A second grouping consists of Sanskrit and its dependent languages, which form a discrete cluster, including the languages of South and Southeast Asia (see Figure 1). However, Sanskrit also influenced Chinese through the translation of Buddhist literature into Chinese, and in this way, one lingua franca influenced another. However, Chinese, with its influence on the dependent languages of Korean, Japanese, and Vietnamese, is also a lingua franca in its own right and constitutes its own third tradition of the pre-Renaissance lingua francas. As a fourth such tradition, or group, the pre-Columbian languages should be mentioned, where the Maya, Inca, and Aztec languages act out their respective roles as lingua francas.[1]

To explain the idea of "dependence," we would like to refer to the relationships between states and their neighbors as reflected in linguistic realia. In the same way that vassal states depend upon a central power, the languages of dependent states are often dependent on the language of the dominant state and its culture, political systems, religion, science, and general language use. In linguistic terms, a dependent language is one that borrows a basic system of concepts, either from a prior lingua franca or from a current dominant one. These borrowings include writing systems (e.g. iconographic, logographic, phonetic, rebus writing, and so forth), as well as loanwords, loan translations (or calques), and loan concepts. A dominant cultural language, or a lingua franca, in the sense of being the common medium of communication on all levels in a given geographical area, usually has a number of dependent translation languages that it semantically bridges.

Ideally, African languages should also be considered within our proposed groups, but the difficulty is that almost nothing is known of pre-Renaissance African languages because of the lack of any historical writing system. However, Arabic as a lingua franca greatly influenced African languages, among them Swahili, which became an African lingua franca in its own right, but unfortunately remained undocumented until modern times. An exception is classical Egyptian, which devised its writing system roughly at the same time as Sumerian, but never acquired the status of lingua franca. The later development of classical Egyptian into Coptic as an important lingua sacra will be discussed below.

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[1]See the contribution of Lars Pharo to this volume.

Year	Middle East/Europe		India	China	America
	I		II	III	IV
-3000	Sumerian	—Elamite			
	l				
	l				
-2000	Akkadian	—Hurrian/Hittite —Ugaritic —Urartian —Old Persian			
	l				
-800	Phoenician/ Aramaic				
	l		—Sogdian —Chinese		
			—Cambodian		—Korean
		—Coptic	—Burmese		—Japanese
-300	Greek	—Syriac	Sanskrit —Laotic	Chinese	—Vietnamese
		—Armenian	—Thai		—Uighur
	l	—Arabic	—Indonesian		—Mongolian
	l	—Old Slavonic	—Tibetan		—Manchu
		—Gothic	—Uighur		
	l		—Mongolian		
			—Hindi etc.		
		—Old and Middle Romance Languages	—Dravidian		
0	Latin	—Old and Middle English —Old and Middle English —Old and Middle High German —Old Norse			
	Syriac	—Languages of Manichaeism and Eastern Christendom			
	l				
	l				
800	Arabic	—Persian —Latin —Hebrew —Turkish and Turkic —Urdu —Berber —Swahili etc.			Maya
					l
					Inca
					l
1500					Aztec

Figure 1: Chart of the four main lingua franca traditions, I. Near East/Europe, II. India, III. China, and IV. America, and their dependent secondary languages. The lingua francas are underlined, and the line before (a synchronic situation) or above (a diachronic situation) a language means it depends on the lingua franca, or dominant language, mentioned before it. The list is approximately chronological when it concerns a lingua franca, and the time scale at the left refers to when the mentioned language came into existence as such. The dependent languages may be later than the time scale shows, as the influx of concepts into them usually happen some time into the period of the lingua franca on which it depends. The languages in a direct historical line with a dominant language are not noted, like Hindi, which descends from Sanskrit and has a great number of loanwords from Sanskrit. The listing of dependent languages given is not complete.

Even though many historical languages may be considered dominant, cultural languages, or lingua francas, emphasis will be put on the languages within the four traditions delineated above, namely, 1) the Near East and Europe, 2) India, 3) China, and 4) America.[2] However, the study of pre-Renaissance spread of knowledge through translation only provides a limited picture, not only because of the lack of documentation but also because the

[2]One might argue that the old languages of the Middle East, like Sumerian and Akkadian and their descendants, are a tradition in their own right. However, the cultural continuity of Mesopotamian culture and knowledge regimes within general Mediterranean culture, as acknowledged in more recent historical research, vouches for continuities also into the early history of European culture. This is the reason why we treat the Near East and Europe as one tradition. There may be an argument to be made that the old Mesopotamian traditions also diffused into Far Eastern traditions, but more research, and indeed historical material, is needed to substantiate this.

spoken forms of these languages are lost to us, even though some of them have been transformed into the present spoken languages. This hampers our ability to assess how phonologically similar and hence accessible spoken languages may have been to each other.

Pre-Renaissance production of manuscripts, books, and documents (before the age of Gutenberg-printing) needed substantial funding, necessitating the intellectual resources of writers, scribes, and translators, as well as patrons to commission and support writing and book production. Indeed, an initiative to make intellectual property or political guidelines known across borders presupposes the will to act on a greater scale. When there is a wish or necessity to make it possible, to appropriate knowledge systems outside its language of origin, translation becomes a necesssity. Thus the translators become among the oldest officials we find, known as eme.bal in Sumerian of the third millennium BCE, also inherent in the Akkadian word *targumannu* (from the Semitic root *rgm*- "declare, shout, speak"), which became a common loanword, Arabic *tarjaman*, Turkish (and English!) *dragoman*, and so forth. The dragoman, with his multilingual skills, made himself indispensable for oral and written communication between states and peoples, whether for diplomatic, commercial or religious purposes.[3]

The points in history when translations take place are important periods because great resources are allocated to such activities by political and religious authorities. It is often the case that key cultural texts are not only written but also translated during processes of establishing nations and even empires. Empires have a need for a common standardized medium: an imperial language of communication between the centralized state administration and the many languages existing within the empire. This is usually—but not always—the language of the conquering people. It can also be the language of a previous empire in the same region, as was the case when China was conquered by Mongols and Manchus, or the case in the first Persian Empire where the widely spoken trading language of Aramaic was chosen as lingua franca. Under more usual circumstances, however, important textual corpora are written in a language that is, or later becomes, an imperial language or even an international language. The reason for this is that empires usually prefer to promote their own political, religious, and scientific canons within their area of dominion, to secure their imperial control. Moreover, states on the margins of empires—or even competing state formations—may wish, for a variety of reasons, to share the imperial knowledge systems and knowledge regimes. When the center of political power changes, the imperial language lingers on and often displays a stability superior to that of the empire itself—something that characterizes most of the lingua francas mentioned.

However, the term "lingua franca" originated from usage that was not imperial. We find its origin in the macaronic trade language of the Mediterranean, spoken already before the Renaissance and containing many common words and idioms of commerce and shipping from mostly Italian, French, Turkish, or Arabic seafarers. This lingua franca, *sensu strictu*, was called the language of the "Farangi" by the Arabs, with the word "farangi" originally being the term by which Arabs referred to Europeans (or the Francae), but acquiring the meaning "foreign"; the term "farangi" was widely employed, even as a loanword in Thai. That original lingua franca became the basic vehicle of trade and commerce and the more elementary exchanges of commodities and know-how, while Latin in the West and Greek and Arabic in the Eastern Mediterranean remained the languages of more complex knowledge

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[3]For an example of the diplomatic lingua franca use of Akkadian, see the contribution of Lutz Edzard to the present volume, showing the importance of Akkadian as a lingua diplomatica.

systems, even though these great cultural languages were also employed in more simple forms of communication.[4] Moreover, a function of this mixed language was to communicate concepts across ethnic or national borders. As such, the Mediterranean lingua franca has similarities with Akkadian in the Persian Empire, which remained a commercial lingua franca even in the period when Aramaic was the official language of the empire (*Reichsaramäisch*). Essential for our definition of a lingua franca is its function of facilitating communication between diverse ethnic and linguistic groups *on all levels of communication*, and that it is *different from the mother tongue of those who employ it* for speech and writing, apart from the users who belong to the ethnicity from which the language originated.

It is universally accepted that dependent or smaller languages of the periphery take over the concepts of the center, that, is the great concentrations of power, and that they adopt some of the imperial grandeur by emulating their concepts and systems of knowledge through loanwords, loan translations, and loan concepts. The dependent languages may be forced to adopt such systems while being subjected to imperial rule, but it is also a matter of peoples not necessarily under the sway of central dominance taking over the efficient, even fashionable concepts and behavior of the center. As an opposing process, the center may also wish to exploit the resources and skills of the periphery, and thus words and concepts accompanying commodities, crafts, technologies, and knowledge resources are absorbed into the imperial lingua franca. This may take place by means of loanwords, but systems of knowledge are also accommodated into a lingua franca by loan translations. A **loan translation** is most frequently a learned construction, and is often created when a dependent language wishes to take over a system of concepts from a lingua franca—in the way that German scholars of the late Middle Ages would construct loan translations from Latin to absorb the Classical traditions; few would recognize *Zufall* in German from Latin *accidentia* (in its turn from Greek ἐπιπίπτειν!) *Wirklichkeit* from *actualitas*, or *eigentlich* from *proprie*. On the other hand, French and English would employ **loanwords** from Latin for this very purpose. The same is true for Tibetan, which employed loan translations for every key concept of Buddhism, while Buddhist Chinese language employed loanwords to some extent, but mostly learned loan translations, which are easily identifiable. While loanwords are easy to connect with the source language, loan translations tend to be unrecognizable without a certain knowledge of linguistic history and of the original language from which it generated. On the other hand, a loan translation tends to be more easily integrated into not only the learned register but with time also into the vernacular of the receiving language. In fact, loan translations were often preferred to loanwords because they were more effective in appropriating and integrating a foreign set of concepts into a receiving language and culture. Good examples of such translations are Armenian translations of Greek literature, as well as Old Church Slavonic translations of the Bible (while domesticating Christianity in a Slavonic context).

A **loan concept** is always concomitant with a loanword and a loan translation, as a concept taken over from one language to another. But a concept can also be taken over by a language when it is "moved" onto a particular word originally not connected with the receiving language. As an example we could mention the word *God*—translated from Latin *deus* and Greek *theos*, employing an older Germanic word for an insignificant group of heathen gods, originally in neuter, but with the translation changed into masculine. This concept diffused

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[4]See the contribution of Reinier Salverda to this volume.

globally, but often indigenous words in receiving languages have been employed to denote it, and thus the concept diffuses by being joined with words and expressions in receiving languages not originally having this conceptual content. In this case, the concept is loaned but not the word, and is now denoted by a word originally found in the receiving language which originally had another meaning, as is also the case with the pre-Christian Germanic God, Slavic Bog, ultimately related to Sanskrit Bhaga ("lot," god of Fate and Luck), and so forth. There are many other examples of this phenomenon across language families, such as Akkadian *apsû* (from Sumerian abzu), 'the subterranean sweet waters' which not only gave rise to Greek "abyss" but to Hebrew *efes* "zero," particularly in its biblical idiomatic usage, *afsê areṣ*, "ends of the earth" (which is where the original Apsû was to be found). Another famous example is the English expression "holy ghost," derived from the German "*der heilige Geist*", "holy spirit." Further, as in the case of the Greek concepts of "soul," and so forth, we can see that the reception of terminologies from antiquity into later European tradition is a blend of l) loan concepts, where already existing words are employed to denote the loaned concept, of 2) loan translations, where new words are constructed, often element by element, to denote the foreign concept, and 3) loanwords, where the word denoting the concept in the original language is taken over with minor (or often, with time, major) modifications.

The relation between loanword, loan translation (or "calque," as it is sometimes called), and loan concept can be very complex, as is illustrated by the Greek word νοῦς, "thinking," "experience," "das Aufleben," or "intelligence"; and ψυχῇ, "life power," "soul"; and then πνεῦμα, "spirit," are translated throughout European History in fairly regular ways, with fixed equivalents. Νοῦς comes from the verb νοέω, "to notice," "perceive," then developed into the idea of the "intelligence," or highest principle in the individual. Sanskrit *ātman*, in much the same way, denotes the absolute self, while *prāṇa* denotes "breath," "life force," or "soul." In the period around 600 BCE and after, it seems that several intellectual cultures developed various mental entities on the basis of wind- and breath-metaphors, ψυχῇ being related to ψυχέω, "to blow," *ātman* ultimately related to German *atmen*, which then ended up as a general term for self and as a reflective pronoun. The same metaphorization and abstraction can be traced in Semitic languages, from Akkadian *napishtu* and *ruah*, Arabic *nafs*—both a word for soul and self, as well as a reflective pronoun—and *ruah*, with meanings of "wind," "spirit," πνεῦμα, as used in "The Holy Ghost," and so on. It also has a similar double meaning, namely that of "wind," "air," as well as *spiritus*, being the equivalent in Latin, and "*Geist*" (German) and then "ghost." The ψυχῇ is represented by *animus* in Latin, also a wind metaphor as in Greek ἄνεμος, being a word only for wind in Greek. *Animus* is made equivalent to the Gothic *sáiwala*, which defies etymology, but is in fact the ancestor of the German "*Seele*" and English "Soul," all of which were made into expressions for the Greek concept belonging to ψυχῇ. However, in Old French we find *courage* as the loan concept equivalent *animus*, parallel with the Old High German equivalent *Mut*. The concept of νοῦς, and its derivatives, are moved onto the Latin *intellego* with it derivatives, being, however, rather an epistemological term from the beginning, and not a wind/breath metaphor, *intellego*, and so on. It was evidently well established as an equivalent of the loaned Greek concept at the time of Cicero, when he translated the *Timaeus*. Later we find *intellectus*, "intellect," and so on, as a loanword into Old French and English, but we also find *understonde* as a loan translation of *intellego* in Chaucer (fourteenth century), the prefix *unter-*, *under-* in old Germanic languages, approaching also the meaning of Latin *inter-*.

In the Old French translation of Boethius' *De consolatione* of Jean de Main (late twelfth century), whom Chaucer might often emulate in his translation of the same, we find another Latin descendent used to denote the loaned concept of *intellego*, namely *entens*, from the Latin *intendo*. In works translated from Latin by the Old High German translator, Notker (around 1000 CE), we find *bechénno* as a loan concept and denotational equivalent of *intellego*. Later we find *verstan* in Middle High German (Old Norse *fyrirstanda*), constructed as a loan translation in a similar way as *understonde* in English, as well as *vernunft* for *intellectus*. All of these terms were important throughout European traditions. The learned loan translation of *intellectus* is also reflected in Old Norse as *undirstanda*. Another instructive, and related, loan translation of Old Norse from Latin is *samblása* for *conspirare*, and *inblása* for *inspirare*.

Every lingua franca was a local language in origin, like Latin, Arabic, and so on, but grew in influence, often within a military context that employed the given language. Being initially a spoken and living language, with conquest and increasing cultural influence it becomes a lingua franca, while at the same time undergoing a process of formalization; the lingua franca would gradually differ from the spoken languages in its proximity, but as a carrier of political, religious, and scientific knowledge, it would influence the dependent languages by the processes described above. Thus we see that an historical lingua franca can end up as a dead language (i.e. written but no longer spoken), sometimes quite far removed from the spoken languages in its linguistic family, but still being the main medium of communication for various knowledge systems. Thus the lingua franca, dead in various degrees, becomes the formalized medium of the governing ideologies and political culture of the elite, including religion; the lingua franca now takes on the roles of being a lingua sacra, a *lingua deorum* (or *dei*!) as well as a *lingua poetica*. Adopted by the bureaucracies and the governing bodies it becomes the *lingua administrativa*, and military forces develop concepts for various levels of command through a *lingua militaris*. Indeed it is remarkable that enemies by convention share the same military terminology for rank, strategy, and weaponry, the systems of concepts being denoted by loan translations or loanwords of an original lingua franca which they share. However, as in the case of the lingua franca proper, that of the *farangi*, most lingua francas retain their use as a *lingua mercantilis*, communicating a rich field of common words for commodities, foods items, and crafts, as well as trade and naval terminologies, be they civil or military, thus integrating the standards and symbol systems of crafts, trade, and commerce. This aspect of the lingua franca often borders on the standardizations of science of the *lingua scientiarum*, even the *lingua mathematica* as they are developed into a universal language of symbols.

In his contribution, Reinier Salverda takes another view of the relation between the lingua franca and the lingua sacra, which he treats as a category distinct from the lingua franca. For him the term lingua franca mostly denotes the spoken language, as a tool of the more basic kind of communication needed by trade and travel, in particular exemplified by the Mediterranean mixing of languages being the origin of the term. However, in our efforts to understand the diffusion of knowledge, we also include in our definition of lingua franca its more general use, namely, a standardized language, most often having its origin in the language used by powerful states and empires as an instrument to rule great states, and thus encompassing what we loosely might term the "cultural languages." Expressions and concepts stemming from religion often enter into the dependent languages and are used in general without conscious religious connotations for the users. Religion throughout history

has been a great force in the diffusion of knowledge and plays a major role in diffusing loanwords and loan translations. With literatures being translated from the various lingua francas into dependent languages, a great number of neologisms, and loan translations are created in the dependent languages. Such words can often be identified as being created at certain moments and by certain authors and translators, usually representing the elite classes. In many cases these new expressions quickly become part of ordinary oral terminology, since lower social classes often emulate the higher, also in matters of language, and are sometimes also being forced to adopt both religious and administrative terminology from the conquering and then ruling classes.

In effect, the formalized languages of the ruling powers and classes have a great impact on the dependent languages through religion and administration, since subjects need to relate to the authorities. In any case, religious teaching and preaching is a fundamental way for lingua franca terminologies to find their way into the general spoken language. Thus lingua sacra and *lingua administrativa*, as aspects of the lingua franca, are vital components of the global history of languages, both written and spoken. A lingua franca, then, may be typologized also in the following way:

1. The purely spoken lingua franca, used only for pragmatic and arbitrary communication, mostly in trade, often called a macaronic language;
2. The spoken language, a mix of several languages and grammars, employed as a means of communication for groups of peoples, often diasporas, but still stable enough to compose literature. An example of such a lingua franca is Yiddish, a mix of Slavonic and German words and grammars, a kind of macaronic language, but with a long history, also of producing *belles lettres*;
3. A lingua franca, originating as a national language and becoming formalized first as an imperial language and then as a language of international diffusion of concepts and knowledge, with its literature being widely translated.

A lingua franca is thus a carrier of knowledge systems that can move from a lingua franca to a dependent language, or from a lingua franca to another lingua franca. Knowledge systems, however, can transcend ordinary written and spoken languages, as in mathematics, which employs a widely accepted notation system and gives meaning to Galileo's saying, "La lingua mathematica è la lingua della natura," an idea taken up by Leibnitz in his attempts to create a consistent universal language. The mathematical systems of knowledge are communicated by symbolic expressions that become standardized universally, at least in more recent history. Such standardization of systems of knowledge sometimes transcend ordinary languages and even lingua francas, as is the case with symbols for weight, length, and other measures. One example of the universalization of this kind is Euclid's mathematical works, which have been spread by translations of the prose in this text of Euclid, but also through the symbolic drawings accompanying the text. As for religious symbols being universalized, every religion has a rich symbolic representation of the spiritual world and transcendent entities, but these remain more arbitrary in their interpretation and less tangible, and certainly less precise in comparison with the figures of Euclid's *Elements*. The term *scriptura franca* may thus denote two related meanings:

1. A writing system that is constructed and employed in accordance with shared conventions. These consist of iconographic or logographic signs that can be understood

by speakers of quite unrelated spoken languages. Examples are Euclid's figures and such logographic writing systems as Chinese and early Sumerian.

2. A writing system following the adoption of the conceptual regimes of a dominant lingua franca into a dependent language, which is modified to lesser or greater extent.

There is only one alphabet *sensu strictu*; all other forms are simply variants of the same system of 22–30 characters, originating in the second half of the second millennium BCE. The alphabet—like other writing systems—became useful as notations for trade or bureaucratic purposes. It served the need for state administrations to communicate efficiently and for standardizing rules and laws that implemented power and policies, but also for religion and literature. Some forms of the alphabet remain national or ethnic, like that of Armenia, where an alphabet was devised to help attain independence and gain autonomy, with the function of keeping the Armenian people together, even today. This is the case also with the creation of the Tibetan writing system, constructed on the Indian Brāhmī system, as a means of importing the Buddhist religion, culture, and knowledge systems based on the Indian, also with a view to cultural autonomy. One historically important *scriptura franca* was the Phoenician alphabet, which was transformed into Greek and Latin writing systems in the West, and all their dependent systems, and into the Cyrillic alphabet in East Europe, becoming there a *scriptura franca*, after initially being a *scriptura sacra*. Several of the *scriptura francas* were also in their origins *scriptura sacras*, since the adoption of alphabets and writing systems often involved religious aspects, besides other political or cultural intentions.

Aramaic is a further diagnostic example of a highly influential lingua franca and adopted as the lingua franca of the Persian empire. With its moderately efficient but very simple alphabetic writing system, the particular alphabet used for Aramaic also served as a *scriptura franca*, replacing older writing systems of the Middle East and Persia such as cuneiform, since it was perceived as being more efficient both in respect to its few characters and the materials upon which it was written, that is, papyrus and other light materials rather than clay, which was heavy to transport and even store (although clay had the advantage of being cheap). The script of high authority and culture, however, was still cuneiform, which was the old *scriptura franca* and also remained as the *scriptura sacra*. But Aramaic *scriptura franca* still had enormous historical influence as it fostered the Kharoshthi and Brāhmī alphabets, the first Indian writing systems created after c. 300 BCE. All the other alphabets descended from these systems in the whole of South and South East Asia as well as Tibet, also even the sacred writing of Buddhism in East Asia and further Sogdian, Uighur, and classical Mongolian syllabic writing.

The creation of various writing systems often mirrors translation events, such as the translation of the Bible into a host of languages (beginning with Greek, Aramaic / Syriac, and Latin), or the translation of Buddhist scriptures from the lingua franca of Sanskrit into other languages for the diffusion of the Buddhist religion. In general, when the literature of a lingua franca is translated, the *scriptura franca* is often taken over in some form, modified to greater or lesser extent. We see then, that historically, a lingua franca becomes a lingua sacra, *lingua poetica*, *lingua administrativa*, *lingua legalis*, *lingua nobilitatis*, *lingua commercialis*, bringing with them the *scriptura franca* and *scriptura sacra*, *literatura franca*, and other forms of standardization. Thus great religious, scientific, and poetical works diffused into dependent regions and once translated, created common experiences and concepts, all

in multilingual situations where the lingua franca was the common denominator, influencing dependent languages in their semantics, syntax, and grammar by means of loanwords, loan translations, and loan concepts.

As touched upon above and in Figure 1, a lingua franca can be classified within four main groupings with its dependent, secondary languages, namely, 1) the Middle East/European tradition, 2) the Indian tradition, 3) the Chinese tradition, and 4) the American tradition. The three first mentioned traditions are not completely sealed off from the other traditions, as in the mentioned examples of writing and religion, as well as trade and indeed military confrontations—until the Renaissance, which is our chosen period—but the American examples of lingua franca, the most important of which are the Maya and Aztec, with their knowledge systems, *scriptura franca*, *literatura franca*, and so on, are completely isolated from the three other traditions. Still, they display the same characteristics and processes as any other lingua franca.

Sumerian is historically the first language fulfilling our criteria of a lingua franca, having all the characteristics mentioned. It is also the first written language, used originally for economic notation and standardization, but with the centuries it developed from an administrative language into a literary one, and devised a writing system that would last for more than three millennia, employed by a number of dependent languages. Sumerian produced standardized lists of equivalents with other dependent languages, producing lexical resources and means to communicate formally with dependent languages. Sargon (c. 2300 BCE) and his empire introduced the next lingua franca in the region, namely Akkadian, as an official bureaucratic language, though his daughter, the priestess Enheduanna, the first ever named poet, would produce religious poems in the "high" or sacred language of Sumerian. With the demise of the classical Sumerian period around 2000 BCE, Akkadian would dominate as the lingua franca, blossoming during the reign of King Hammurabi, but retaining all the conceptual systems of Sumerian culture, with its earlier writing systems and the regimes of knowledge. Over time, Sumerian literature and religious documents were integrated into the new lingua franca of Akkadian, while Sumerian was retained as the formalized medium of technical terms and standardization. Poetic traditions (e.g. connected with Gilgamesh or with Inanna) were reformulated in Akkadian but retained vestiges of the Sumerian conceptual world, while the Sumerian law code of Urnammu from the twenty-first century BCE influenced the laws of Hammurabi from the eighteenth century, and Sumerian school curricula were adapted to the new situation where Akkadian was the lingua franca that ensured the continuity of knowledge regimes.

Mesopotamian systems of knowledge would enter into the whole of the Middle East through the translation of texts and oral communication, and in this way also became the *cultura franca* over a very long period of time. It remains puzzling that ancient Egyptian hieroglyphs and associated systems of knowledge entered into the common and mainstream Middle Eastern cultures to a much lesser degree. Sumerian/Akkadian tradition, with their religion, sciences, legal systems, writing systems, and so on, penetrated Hittite Anatolia and Hurrian, and later diffused into the Aramaic culture and language; cuneiform writing was adopted for Persian. Greek religion has been shown to have been influenced by Hittite, which itself was related to Hurrian and ultimately influenced by the Sumerian and Akkadian tradition, while the Greek alphabet, as already noted, was borrowed by the Greeks from the Phoenicians. Greek culture was later absorbed by the Near East, and the Greek language became a lingua franca from the time of Alexander the Great, even before Greek language

and culture had influenced the Romans, who provided the new lingua franca in the West, Latin, and translated the knowledge systems from Latin into a large number of European languages. Arabic, the successor lingua franca in the East, resulted from the Arab Conquests, also integrating the heritage of Greek and Latin science, which would eventually be re-translated back into Greek and Latin during the Renaissance. However, in matters of religion and politics, the influence of Arab terminologies is enormous, in all the areas that came under the influence of this powerful lingua franca, from Africa to China, India, and South Asia, and of course, the Middle East and Central Asia.

Clearly, then, we may treat the traditions with their historical origin Sumer as one tradition of lingua franca, with all its expressions and corollaries. To a much smaller extent, then, would Mesopotamia influence cultures in the East, namely Indian and Chinese traditions, which we also have treated as two distinct traditions. Ultimately, the Indian tradition of lingua franca would have a common origin with European languages, and as such also have cultural traits in common with old European cultures in terms of religion, mythology, and many expressions of language. The Sanskrit of India would develop into a lingua franca with all the cultural traits belonging to it, and would provide technical terms in all fields of knowledge to dialects, which originally grew out of Sanskrit and dialects with other origins, like Tamil, but Sanskrit also provided terminologies, concepts, and systems of knowledge to areas outside of India, to the whole of South and South East Asia. Coming with the Sanskrit language, Hindu and Buddhist religions would spread in a number of waves throughout history, transforming Indonesia, Thailand, Cambodia, and Burma into states diffused by Indian culture, religion and political systems, and even today the Thai language has about 20% loanwords from Sanskrit, all from ordinary words to technical terms. After the Tibetan king decided that Tibet should adopt Buddhist religion, translation activities for several centuries also transformed Tibetan language, as well as culture, by a well-ordered administration of this change. The various writing systems of all these areas were based on the Indian Brāhmī syllabic writing, ultimately derived from the Aramaic alphabet.

But Indian systems of knowledge would also influence China, in particular through the translation of Buddhist concepts into the Han language from the end of the second century CE onwards, for a period of about thousand years—the initial contact between Indian Buddhists being traditionally 49 CE when a mission of Buddhist monks visited the Han imperial court. In this way Buddhism, a system of knowledge generated with Sanskrit terminology, had a profound influence on Chinese thinking and language, as well as religion and even science—such as Indian logic. However, Chinese is in itself a lingual franca, diffusing into many other languages with its writing systems, with its associated social policies based on Confucius and the Chinese form of Buddhism. Culturally, there has been a virtual border between Vietnam and Cambodia throughout history; west of this border Indian culture was most influential while the east was primarily influenced by Chinese ways of thinking, writing, and producing technical terms. This does not necessarily mean that Chinese influence west of this cultural border was entirely negligible, but it is insignificant compared to the impact Chinese systems of knowledge has exerted on Korea, Japan, and Vietnam.

It is clear, however, that the borders between the various types of lingua francas are not absolutely fixed borders, excepting the American tradition. The Arab lingua franca carried its concepts far into the areas allotted to the Indian tradition, and the Indian tradition influenced the Chinese. But before the Renaissance the traditions are distinct enough to treat them as carrying with them separate systems of concepts, terminologies, regimes of knowl-

edge. After the Renaissance, the situation changes radically with new emerging empires and global powers. Spanish, Portuguese, Persian, Turkish, French and English all function as a lingua franca within its dominion, influencing every aspect of culture profoundly.

So far we have treated the lingua francas mostly as functions of empires influencing dependent languages and creating multilingual situations through translation conventions, loans translations, and loanwords. However, such processes may not necessarily be coincident with imperial power. We have mentioned above how mathematical concepts have diffused universally by translation as a fairly stable system of knowledge. Thus, systems of scientific knowledge have diffused across the lingua franca boundaries. A similar situation is the case with religion, which may diffuse globally by translation, independent of imperial power, and by believers, to some extent independent of political interests. This is the case with the three world religions of Buddhism, Christianity, and Islam, which have spread globally and greatly transformed the languages as well as the ways of thinking dominant in the areas into which they have diffused. An interesting example is the Manichean religion, originally created in Mesopotamia by Mani in the third century CE with its original writings in Syriac and Aramaic, a lingua franca and in this case also a lingua sacra. However, as a fairly closed system of knowledge, Mani's teachings were translated into a great number of dependent languages, Greek, Coptic, and Latin in the West and Persian, Parthian, Sogdian, Uighur, and Chinese in the East, employing even the Buddhist style of Chinese as its medium. Thus Manichaeism, often described as competing with Christianity, became a globalized system of religious knowledge without imperial backing, since Manichaeism was universally persecuted by political as well as religious authorities, evidently surviving only through religious zeal. Manicheism may thus be said to represent a system of knowledge expressed in a number of languages, much in the same way as a system of knowledge embedded in a lingua franca like Latin, which diffuses into many dependent languages.

The great multilingual works, and the most influential literary works in history, like the Bible, the Quran, the tripiṭaka of Buddhism, as well as the more secular and scientific works, like Aristotle, Galen, and Euclid, mostly diffused within one of the four lingua franca traditions. Confucius stayed within the East Asian tradition and was not translated, since its reception into other language areas in Korea, Japan, and Vietnam could be realized through the Chinese logographic signs, so that classical Chinese is in this sense a truly written lingua franca or *scriptura franca*. The medical sciences of India, as kept in the work *Aṣṭāṅgahṛdya*, would spread into Tibet, and from there into Mongolia. In this way these language areas became dependent on Sanskrit terminology and knowledge (but this important text for the Indian tradition of medicine never spread elsewhere, though ultimately may have been inspired by Galen's work.). Also the Laws of Manu—describing how society should be ordered into classes, how those belonging to classes should perform their duties, and how the King should rule his subjects—were used as a manual of rule exclusively in South and South East Asia, written in the lingua franca of Sanskrit, also the *lingua nobilitatis*, and so on, in these areas. Thus the uses of lingua franca can also limit themselves within borders, notwithstanding the fact that these borders are not completely closed. In the case of America, with Maya and Aztec as the main lingua franca, the borders are closed, for geographic reasons.