

## Comparison of English Language with Various Languages and Vice-Versa for Criminal Investigation

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### ABSTRACT

A visible form to express the feelings, emotions and imaginations in a written form using any instrument on any surface is known as Writing. It is a neuromuscular process in which a person can write with their unconscious as well as conscious mind. It is a medium of conversation among people of their particular region. There are various languages all over the world and so have different writing styles. The present work focuses on highlighting the remarkable comparison between English language to various languages on basis of their script, phonetic sounds, style and designs of their alphabetical appearance while writing. This can help in forensic investigations or criminal investigations when any questioned document is found in various different languages.

**Keywords:** Forensic Linguistics, Linguistics, Language comparison, Language writing.

### INTRODUCTION

Forensic Science - Forensic Science is an application of all applied sciences dealing with criminal justice system. It is a multidisciplinary branch helping to solve any crime scientifically. The scientific study of forensic science is called "Criminalistics" which means 'to study the criminals'. Crime Scene – A place or an area where any crime has been occurred any illegal work is done or any crime has been occurred and a need of forensic investigation is required. There are three main types of crime scene – outdoor crime scene, indoor crime scene and mobile or conventional crime scene. Crime Scene Investigation - A systematic process of investigating any crime scene whether indoor or outdoor crime scene is known as crime scene investigation. This involves securing, documenting, collecting and preserving the biological and physical evidence from a crime scene to identify, connect and convict the suspects. One of the Physical evidence is Questioned document. Questioned Documents – A document on which a question can arise. It involves letters, brochures, bills, wills, tickets, etc. Languages play a very crucial role in criminal investigations. Linguistics - The scientific study on languages is known as Linguistics.

The Swiss linguist Ferdinand de Saussure is widely acknowledged as the key figure in this refocusing of interest, and as the founding father of modern linguistics. Avram Noam Chomsky, an American philosopher and linguist is sometimes known as the 'Father of Linguistics'. Maharishi Panini was a Sanskrit grammarian who gave a comprehensive and scientific theory of phonetics, phonology, and morphology. Panini is considered the founder of the language and literature. Forensic Linguistics – Including this scientific study of languages (linguistics) to Forensic science it becomes a partially important branch in sciences. Jan Svartvik, a Swedish professor of linguistics, is generally recognized as the

"Father of Forensic Linguistics". In 1968, he coined the term and pioneered the field by using linguistic methods to analyze statements in the John Evans murder case, providing a new, scientific approach to legal questioning.

This work includes forensic linguistics with questioned document found at any crime scene. At various crime scenes many various language documents can be found which can be French, Russian, German, Scots, Frisian, Dutch, Norwegian, Spanish, Italian, Portuguese and Bulgarian or may be other languages in European, Asian and other Countries which look similar to English language but differ in pronunciations.

At any crime, suppose a letter or any document is found in Russian language and the suspect has given the sample in English or any other language then with by this type of language comparison the person can be identified or the document can be compared with the other language document and the investigation will be easy. There are 140 – 160 active writing systems or scripts in the world. These scripts give 7,000+ languages to read and write.

The Latin script (or Roman script) is the world's most wide spread writing system which is used by over 300 languages globally (approx 70% of world's population), including major languages across Europe, America, Africa, Asia, and Oceania. Other major systems used in the world includes Arabic, Chinese (Hanzi), Cyrillic, and Devanagari. In this work Latin and Cyrillic systems are discussed.

Latin script includes nearly all West European, Germanic, Roman, and many Slavic, Austronesian, and Bantu languages.

The Cyrillic script is the third official script of the European Union, following Latin and Greek scripts.

The Cyrillic and Latin scripts are different in their origin, Cyrillic (used for Slavic languages like Russian, Bulgarian) evolving from Greek script, while Latin (used in English, Spanish) originated from ancient Roman scripts. Cyrillic has more letters to represent specific Slavic sounds, often featuring a more direct, phonetic, and standardized structure, whereas the Latin script is heavily used in Western Europe.

Here, I have taken ten languages from Latin script (including English language) and two languages from Cyrillic script. The languages I choose are – English, French, German, Scots, Frisian, Dutch, Norwegian, Spanish, Italian, Portuguese, Russian and Bulgarian.

The Alphabets used in above mentioned languages look similar but have different pronunciations of letters in alphabets. As English is a standard language, it can be compared with other languages which look similar in appearance and sometimes sound similar.

The 26 letters of the ISO basic Latin alphabet are taken as standard. These standard letters are the letters used in various languages.

## **METHODOLOGY**

Forensic Science contains seven main principles which are:

1. Law of Comparison
2. Law of Analysis
3. Law of Probability
4. Law of Circumstantial Facts
5. Law of Exchange
6. Law of Progressive Change
7. Law of Individuality

The work focuses on some main laws mentioned above. Law of comparison which says "like can only be compared with like". Law of analysis: which tell how to analyze something thoroughly. Law of probability: gives a probability of things which can or cannot be happen.

Firstly, few languages are observed which look similar to each other but are different in their phonetic styles. Then Comparing them with the Standard language worldwide i.e. English. There are various languages look similar to English, some of which are chosen, observed and compared to the Standard English Language that is mainly written in Latin Script. Here the nine languages (excluding English) are taken from Latin Script and two languages from Cyrillic Script.

Now, these languages are compared on the basis of the number of alphabets they carry with ligature or diacritics included in them. Secondly, these languages' alphabets are compared to Standard English Language alphabets with their phonetic sounds. This will show the similarity and differences between the alphabets and phonetics of various languages.

## OBSERVATION

The comparison between the languages on basis of their scripts, alphabets and Phonetic sounds are as follows:

- 1) **English** – Latin Script, 26 alphabets [A – Z] (5 vowels and 21 consonants), Standard European language.
- 2) **French** – Latin Script, 26 alphabets [A – Z] including diacritics (accents) (é, à, ç) and ligatures (œ) to modify punctuations which are not considered as separate letters.
- 3) **German** – Latin Script, 30 alphabets = 26 alphabets [A – Z] + 3 umlauts (Ä/ä, Ö/ö, Ü/ü) + a sharp S (ß) or ligature.
- 4) **Scots** – Latin Script, 26 alphabets [A – Z]. Sometimes it incorporates the letter "z" to substitute for the archaic letter "yogh" (ȝ).
- 5) **Frisian** – Latin Script, 26 alphabets [A – Z] including specific diacritics or accented characters (e.g., â, ê, ô, û, ú, î) to indicate vowel sounds.
- 6) **Dutch** – Latin Script, 26 alphabets [A – Z] including occasionally used diacritics (such as ë, é, or ï) for pronunciation and accents like the acute (') and diaeresis (") are also used.
- 7) **Norwegian** – Latin Script, 29 alphabets = 26 alphabets [A – Z] + Æ, Ø, and Å. Two different writing standards are used.
  - a) Bokmål: It is the most common form used by majority of the population.
  - b) Nynorsk: It is created from rural dialects and Old Norse and is popular in western Norway.
- 8) **Spanish** – Latin Script, 27 alphabets = 26 alphabets [A – Z] + letter 'Ñ/ñ' (eñe) including specific diaeresis (ü) or accent (á, é, í, ó, ú) marks on vowels.
- 9) **Italian** – Latin Script, 21 alphabets exactly same as English. J, K, W, X and Y alphabets are generally reserved for foreign loanwords and other alphabets are used as standard alphabets from English. Acute (') and grave (`) accents are used on vowels to show stress or vowel quality.
- 10) **Portuguese** – Latin Script, 26 alphabets [A – Z] including the diacritics like acute (Áá), circumflex (Ââ), grave (Àà), tilde (Ãã), and the cedilla (Çç) for indicating stress and vowel quality. K, W, Y alphabets are primarily reserved for foreign loanwords.
- 11) **Russian** – Cyrillic Script, 33 alphabets (10 vowels, 21 consonants, 2 signs). It is not same as English but some alphabets look similar (А, Е, К, М, etc.) and some are opposite (Я) to Standard English Alphabets and have some hard (Ѡ) and soft (ѡ) signs which do not represent sound themselves but modify the preceding consonant pronunciation.
- 12) **Bulgarian** – Cyrillic Script, 30 alphabets. Like Russian, it is not exactly same as English but some alphabets look similar (А, В, Е, О, etc.), while some alphabets look opposite (И, Я) to the Standard English alphabets.

The Visual Comparison between English and other language alphabets with phonetic sounds are as follows:

| Standard English                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Other Languages                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <p><b>A a B b C c D d E e F f G g H h I i</b><br/> a bee cee dee e ef gee (h)aitch i<br/> [ei] [bi] [si] [di] [i:] [ef] [dʒi:] [(h)entʃ] [ai]</p> <p><b>J j K k L l M m N n O o P p Q q R r</b><br/> jay kay el em en o pee cue ar<br/> [dʒei] [kei] [el] [em] [en] [ou] [pi:] [kju:] [a:or]</p> <p><b>S s T t U u V v W w X x Y y Z z</b><br/> ess tee u vee double-u ex wy(e) zed/zee<br/> [es] [ti:] [ju:] [vi:] [ˈdʌbəlju:] [eks] [wai] [zed/zɪ:]</p> <p>Vowels: A, E, I, O, U.</p> | <p><b>French</b></p> <p><b>A a B b C c D d E e F f G g H h I i</b><br/> [a] [be] [se] [de] [ə] [ef] [ʒe] [aʃ] [i]<br/> <b>J j K k L l M m N n O o P p Q q R r</b><br/> [ʒi] [ka] [el] [em] [en] [o] [pe] [ky] [er]<br/> <b>S s T t U u V v W w X x Y y Z z</b><br/> [es] [te] [y] [ve] [dublave] [ks] [ʒnek] [zed]</p> <p><b>Vowels</b><br/> a ai/aī ain an au ay â e é<br/> [a/a] [e/e] [ɛ] [ɑ] [o] [ɛj/ɛj/ɛ.ɪ/ɛ.ɪ] [ɑ] [e/e/a] [e]<br/> è ê ë eau ei ein en eu i ÿ<br/> [ɛ] [e/e] [ɛ/ø] [o] [ɛ] [ɛ] [ɑ/ɛ] [œ/œ] [i/i] [i/j]<br/> î in o ô œ(u) oi/oī oin on ou/oû oy<br/> [i] [ɛ] [o/o] [o] [œ] [wa] [wɛ] [ɔ] [w/u] [wə]<br/> u ue ui û û un y<br/> [u/y] [œ/y/œ/œ] [qi] [y] [y] [œ] [i/j]</p> <p><b>Consonants</b><br/> b c ch ç d f g gn gu h<br/> [b] [s/k] [ʃ] [s] [d] [f] [ʒ/g] [p] [g] [ø]<br/> j k l/l m n p q r rr s<br/> [ʒ] [k] [l/ø] [m~ø] [n~ø] [p] [k] [r/r] [s] [s~z]<br/> t v w x y z<br/> [t] [v] [v/w] [ks] [i/j] [z]</p>                                                                                                                                  |
| <p><b>A a B b C c D d E e F f G g H h I i</b><br/> a bee cee dee e ef gee (h)aitch i<br/> [ei] [bi] [si] [di] [i:] [ef] [dʒi:] [(h)entʃ] [ai]</p> <p><b>J j K k L l M m N n O o P p Q q R r</b><br/> jay kay el em en o pee cue ar<br/> [dʒei] [kei] [el] [em] [en] [ou] [pi:] [kju:] [a:or]</p> <p><b>S s T t U u V v W w X x Y y Z z</b><br/> ess tee u vee double-u ex wy(e) zed/zee<br/> [es] [ti:] [ju:] [vi:] [ˈdʌbəlju:] [eks] [wai] [zed/zɪ:]</p>                               | <p><b>German</b></p> <p><b>A a B b C c D d E e F f G g H h I i</b><br/> a be ce de e ef ge ha i<br/> [a:] [be:] [tse:] [de:] [e:] [ef] [ge:] [ha:] [i:]</p> <p><b>J j K k L l M m N n O o P p Q q R r</b><br/> jot ka el em en o pe ku er<br/> [jot] [ka:] [el] [em] [en] [o:] [pe:] [ku:] [er]</p> <p><b>S s T t U u V v W w X x Y y Z z</b><br/> es te u vau we äks üpsilon zet<br/> [es] [te:] [u:] [fau] [ve:] [tks] [ˈypsilon] [tset]</p> <p><b>Ä ä Ö ö Ü ü ß B</b><br/> ä ö ü eszett<br/> [ɛ:] [ø:] [y:] [esˈtset]</p> <p><b>Vowels</b></p> <p>Short a e i o u ä ö ü er ei/ai/ay au eu, äu<br/> [a] [ɛ] [i] [ɔ] [ɑ] [ɛ] [œ] [y] [ɛ] [ai] [au] [ɔi]</p> <p>Long a/aa/ah e/ee/eh i/i/iie o/oo/oh u/uh ä/äh ö/öh ü/üh<br/> [ɑ:] [ɛ:] [i:] [ɔ:] [u:] [ɛ:] [œ:] [y:]</p> <p><b>Consonants</b><br/> b c ch ck d dt dsch f g h j<br/> [pfe] [kts] [ç/k] [k] [t/d] [t] [dʒ] [f] [k/g] [t/θ] [j/ʒ]<br/> k l m n ng p pf ph qu r<br/> [k] [l] [m] [n] [ŋ] [p] [pf] [f] [kv] [w/k/ø]<br/> s sch ß (ss) t ts tsch v w y z<br/> [z/s/ʃ] [ʃ] [s] [t] [ts] [ʃ] [tv] [v] [ʃ/y] [ts]</p> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p><b>Scots</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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| <p><b>A a B b C c D d E e F f G g H h I i</b></p> <p>a bee cee dee e ef gee (h)aitch i</p> <p>[eɪ] [bi:] [si:] [di:] [i:] [ɛf] [dʒi:] [(h)entʃ] [aɪ]</p> <p><b>J j K k L l M m N n O o P p Q q R r</b></p> <p>jay kay el em en o pee cue ar</p> <p>[dʒeɪ] [keɪ] [ɛl] [ɛm] [ɛn] [oʊ] [pi:] [kju:] [ɑːr]</p> <p><b>S s T t U u V v W w X x Y y Z z</b></p> <p>ess tee u vee double-u ex wy(e) zed/zee</p> <p>[ɛs] [ti:] [ju:] [vi:] [ˈdʌbəlju:] [ɛks] [waɪ] [zɛd/zɪ:]</p> | <p><b>A a B b C c D d E e F f G g H h I i J j</b></p> <p>[e] [bi:] [si:] [di:] [i:] [ɛf] [dʒi:] [(h)entʃ] [æ] [dʒeɪ]</p> <p><b>K k L l M m N n O o P p Q q R r S s T t</b></p> <p>[ke] [ɛl] [ɛm] [ɛn] [o] [pi:] [kju] [ar] [ɛs] [u]</p> <p><b>U u V v W w X x Y y Z z 3 3</b></p> <p>[ju] [vi] [dʌblɪju] [ɛks] [wæ] [zɛd] [jɔ]</p> <p><b>Vowels &amp; diphthongs</b></p> <p>a e i o u a-e/ae</p> <p>[ɑ/ɑ] [ɛ] [i] [ɔ~o] [ʌ] [e]</p> <p>ai/ay au ee/e-e/ie ee/ie ei/ea ew</p> <p>[eɪ] [ɑː/ɔː] [i] [i:] [ei] [ju]</p> <p>i-e/y-e/ey oa/o-e oi/oy ou/oo ow(e) ui/eu</p> <p>[əi] [o] [oe] [u] [ʌu] [ø]</p> <p><b>Consonants</b></p> <p>b c ch d f g gh gn</p> <p>[b] [k/s] [x] [d] [f] [g] [x] [n]</p> <p>h j k kn l m n ng</p> <p>[h] [dʒ] [k] [n] [l] [m] [n] [ŋ]</p> <p>nch p q r s t th v</p> <p>[nʃ] [p] [k] [r~ɹ] [s/z] [t/ʔ] [ð/θ] [v]</p> <p>w wh wr x y z</p> <p>[w] [ʌw/xw/f] [wt/r/vr] [z] [j] [z/jɪ/ŋ]</p>                                                                                                     |
| <p><b>A a B b C c D d E e F f G g H h I i</b></p> <p>a bee cee dee e ef gee (h)aitch i</p> <p>[eɪ] [bi:] [si:] [di:] [i:] [ɛf] [dʒi:] [(h)entʃ] [aɪ]</p> <p><b>J j K k L l M m N n O o P p Q q R r</b></p> <p>jay kay el em en o pee cue ar</p> <p>[dʒeɪ] [keɪ] [ɛl] [ɛm] [ɛn] [oʊ] [pi:] [kju:] [ɑːr]</p> <p><b>S s T t U u V v W w X x Y y Z z</b></p> <p>ess tee u vee double-u ex wy(e) zed/zee</p> <p>[ɛs] [ti:] [ju:] [vi:] [ˈdʌbəlju:] [ɛks] [waɪ] [zɛd/zɪ:]</p> | <p><b>Frisian</b></p> <p><b>A a B b C c D d E e F f G g H h I/Y i/y</b></p> <p>aa bee see dee ee ef gee haa ii</p> <p><b>J j K k L l M m N n O o P p Q q R r</b></p> <p>jee kaa el em en oo pee kuu er</p> <p><b>S s T t U u V v W w X x Z z</b></p> <p>es tee uu fee wee iks set</p> <p><b>Vowels, diphthongs and triphthongs</b></p> <p>a â aa aai ai au e</p> <p>[ɑ/ɑ] [ɔ(:)] [a:] [aɪ/ai] [ai] [au] [e/ɛ/ə]</p> <p>ê ea eau ee ei eo eu</p> <p>[ɛ:] [iə/je] [oa/joc] [e:] [ai/ei/i] [oo] [œ]</p> <p>i ie ieu ii ij iuw o</p> <p>[i/i/i/ə] [iə/jɪ] [iu] [i:] [ɛj] [ju:/joc] [o/ɑ/ɔ]</p> <p>ô oa oai oe oei oo ou</p> <p>[ɔ:] [oa/wa/a] [oai/wai/wai] [uə/u/u:] [ui] [o:] [ou]</p> <p>u û ū ue ui uo y</p> <p>[y/y/ə/ə] [y/y:] [u/u:] [yə] [oy] [wə] [i/ɛi]</p> <p><b>Consonants</b></p> <p>b ch d f g h j</p> <p>[b] [x] [d/r] [f] [g/y] [h] [j]</p> <p>k l m n ng p r</p> <p>[k] [l/r] [m] [n] [ŋ] [p] [r]</p> <p>s sj t tsj v w x</p> <p>[s] [sʰ] [t] [tsʰ] [v] [v/f/w] [ks]</p> <p>y z z</p> <p>[j] [x] [xʰ]</p> |

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| <p><b>A a B b C c D d E e F f G g H h I i</b><br/> a bee cee dee e ef gee (h)aitch i<br/> [ei] [bi:] [si:] [di:] [i:] [ef] [dʒi:] [(h)entʃ] [ai]</p> <p><b>J j K k L l M m N n O o P p Q q R r</b><br/> jay kay el em en o pee cue ar<br/> [dʒei] [kei] [el] [em] [en] [ou] [pi:] [kju:] [ɑ:/ɑr]</p> <p><b>S s T t U u V v W w X x Y y Z z</b><br/> ess tee u vee double-u ex wy(e) zed/zee<br/> [es] [ti:] [ju:] [vi:] [ˈdʌbəlju:] [eks] [wai] [zed/zi:]</p> | <p><b>Dutch</b></p> <p><b>A a B b C c D d E e F f G g H h I i</b><br/> a be ce de e ef ge ha i<br/> <b>J j K k L l M m N n O o P p Q q R r</b><br/> je ka el em en o pe ku er<br/> <b>S s T t U u V v W w X x Y y Z z</b><br/> es te u ve we iks y zet</p> <p>Vowels and diphthongs<br/> a aa aai auw ay e ee eeuw ei eu i ie<br/> [ɑ] [ɑ:] [ɑi:] [ʌw] [ai:] [e, ə] [e:] [e:u] [ei] [e:] [i:] [i:]<br/> ieuw ij o oe oo ooi ou u ui uu uw<br/> [iu] [ei] [o:] [u] [o:] [oi:] [ʌu] [y] [œy] [y] [y:u]</p> <p>Consonants<br/> b ch ck d f g h j k l m n<br/> [p, b] [x] [k] [t, d] [f] [x, ɣ] [h] [j] [k] [tʃ] [m] [n]<br/> ng nj p r s sch sj t tj v w z<br/> [ŋ] [nj] [p] [r, ʁ] [s] [sx] [ʃ] [t] [v] [w] [z]</p>                                                                                                                                                                                                                                                                       |
| <p><b>A a B b C c D d E e F f G g H h I i</b><br/> a bee cee dee e ef gee (h)aitch i<br/> [ei] [bi:] [si:] [di:] [i:] [ef] [dʒi:] [(h)entʃ] [ai]</p> <p><b>J j K k L l M m N n O o P p Q q R r</b><br/> jay kay el em en o pee cue ar<br/> [dʒei] [kei] [el] [em] [en] [ou] [pi:] [kju:] [ɑ:/ɑr]</p> <p><b>S s T t U u V v W w X x Y y Z z</b><br/> ess tee u vee double-u ex wy(e) zed/zee<br/> [es] [ti:] [ju:] [vi:] [ˈdʌbəlju:] [eks] [wai] [zed/zi:]</p> | <p><b>Norwegian</b></p> <p><b>A a B b C c D d E e F f G g H h</b><br/> a be se de e ef ge hå<br/> [ɑ:] [be:] [se:] [de:] [e:] [ef] [ge:] [hɑ:]</p> <p><b>I i J j K k L l M m N n O o P p</b><br/> i je/jåd ká el em en o pe<br/> [i:] [je:/jɔd] [kʰɑ:] [el] [em] [en] [u:] [pʰe:]</p> <p><b>Q q R r S s T t U u V v W w X x</b><br/> ku er es te u ve dâbel-ve eks<br/> [kʰu:] [æɾ] [es] [tʰe:] [u:] [ve:] [dâbelu:] [eks]</p> <p><b>Y y Z z Æ æ O o Å å</b><br/> y set æ ø å<br/> [y:] [set] [æ:] [ø:] [ɑ:]</p> <p>Vowels and diphthongs<br/> a ai au e ei i o oi<br/> [ɑ] [ai] [æu] [e/ø:/æ:/y/ə] [æu/ei] [i:] [u/ø/ə] [ɔv]<br/> u ui y æ ø oy å<br/> [ʉ/u] [hi] [v/y:] [æ/e] [ø] [ov] [ɔ]</p> <p>Consonants<br/> b d dj f g gj gn h<br/> [b] [d] [j] [f] [j/ɣ] [j] [ɣn] [h]<br/> hj hv j k kj l m n<br/> [j] [v] [j] [ç/k] [ç] [lʰt] [m] [n]<br/> ng p r rd rl m rs rt<br/> [ŋ] [p] [r/ʁ/ɣ] [dʰr/tʰr] [l] [n] [s] [t]<br/> s sj sk skj t tj v<br/> [s] [s] [sʰk] [s] [t] [ç] [v]</p> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p><b>Spanish</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <p><b>A a B b C c D d E e F f G g H h I i</b></p> <p>a bee cee dee e ef gee (h)aitch i</p> <p>[ei] [bi] [si] [di] [i] [ef] [dʒi:] [(h)entʃ] [ai]</p> <p><b>J j K k L l M m N n O o P p Q q R r</b></p> <p>jay kay el em en o pee cue ar</p> <p>[dʒei] [kei] [el] [em] [en] [ou] [pi:] [kju:] [oʔor]</p> <p><b>S s T t U u V v W w X x Y y Z z</b></p> <p>ess tee u vee double-u ex wy(e) zed/zee</p> <p>[es] [ti:] [ju:] [vi:] [ˈdʌbəlju:] [eks] [wai] [zed/zɪ:]</p> | <p><b>A a B b C c D d E e F f G g H h I i</b></p> <p>a be ce de e efe ge hache i</p> <p>[a] [be] [θe] [de] [e] [efe] [xe] [aŋe] [i]</p> <p><b>J j K k L l M m N n Ñ ñ O o P p Q q</b></p> <p>jota ka ele eme ene eñe o pe cu</p> <p>[xota] [ka] [ele] [eme] [ene] [eɲe] [o] [pe] [ku]</p> <p><b>R r S s T t U u V v W w X x Y y Z z</b></p> <p>ere ese te u ve doble ve equis i griega zeta</p> <p>[ere] [ese] [te] [u] [be] [doble βe] [ekis] [i griega] [θeta]</p> <p><b>Vowels (Vocales)</b></p> <p>a e i o u</p> <p>[a] [e] [i] [o] [u]</p> <p><b>Consonants (Consonantes)</b></p> <p>b c ch d f g gu gü h</p> <p>[b/β] [s/k] [tʃ] [d/ð] [f] [x/h/g/ɣ] [g/gw] [gw] silent</p> <p>j k l ll m n ñ p q</p> <p>[x/h] [k] [l] [j/ɟ/ʎ/ʝ] [m] [n/ɲ] [ɲ] [p] [k]</p> <p>r rr s t v w x y z</p> <p>[r/r] [r] [s/h] [t] [b/β] [w/β/b] [ks] [j/ɟ] [s]</p>                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>A a B b C c D d E e F f G g H h I i</b></p> <p>a bee cee dee e ef gee (h)aitch i</p> <p>[ei] [bi] [si] [di] [i] [ef] [dʒi:] [(h)entʃ] [ai]</p> <p><b>J j K k L l M m N n O o P p Q q R r</b></p> <p>jay kay el em en o pee cue ar</p> <p>[dʒei] [kei] [el] [em] [en] [ou] [pi:] [kju:] [oʔor]</p> <p><b>S s T t U u V v W w X x Y y Z z</b></p> <p>ess tee u vee double-u ex wy(e) zed/zee</p> <p>[es] [ti:] [ju:] [vi:] [ˈdʌbəlju:] [eks] [wai] [zed/zɪ:]</p> | <p><b>Italian</b></p> <p><b>A a B b C c D d E e F f G g H h</b></p> <p>a bi ci di e effe gi acca</p> <p>[a] [bi] [tʃi] [di] [e] [ˈeffe] [dʒi] [ˈakka]</p> <p><b>I i L l M m N n O o P p Q q R r</b></p> <p>i elle emme enne o pi cu ere</p> <p>[i] [ˈelle] [ˈemme] [ˈenne] [o] [pi] [ku] [ˈerre]</p> <p><b>S s T t U u V v Z z</b></p> <p>esse ti u vi/vu zeta</p> <p>[ˈesse] [ti] [u] [vi/vu] [dʒɛta]</p> <p><b>Vowels &amp; diphthongs</b></p> <p>a ai au e è é ei eu</p> <p>[a] [ai] [au] [e, e] [e] [e] [ei] [eu]</p> <p>i ie o ò ó oi u uo</p> <p>[i, i] [je] [o, o] [o] [o] [oi] [u, w] [wo]</p> <p><b>Consonants</b></p> <p>b c cc ch d f g gg gh gli</p> <p>[b] [tʃ, k] [tʃ, k:] [k] [d] [f] [dʒ, g] [dʒ:, ʒ] [g] [ʎ/ç, gli]</p> <p>gn h j k l m n p q qu</p> <p>[ɲ(ç)] [θ] [j, dʒ, ʒ] [k] [l] [m] [n] [p] [k] [kw]</p> <p>r s sc t v w x y z</p> <p>[r] [s, z] [ʃ, sk] [t] [v] [w, v] [ks] [i, j] [ts(ç), dz(ç)]</p> <p><b>Notes</b></p> <p>c = [tʃ] before i or e, but [k] elsewhere      g = [dʒ] before i or e, but [g] elsewhere</p> <p>s = [z] between vowels, but [s] elsewhere      sc = [ʃ] before i or e but [sk] before a, o or u</p> <p>A double consonant is longer version of a single consonant and shortens the preceding vowel</p> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p><b>Portuguese</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <p><b>A a B b C c D d E e F f G g H h I i</b></p> <p>a bee cee dee e ef gee (h)aitch i</p> <p>[ei] [bi] [si] [di] [i] [ef] [dʒi:] [(h)entʃ] [ai]</p> <p><b>J j K k L l M m N n O o P p Q q R r</b></p> <p>jay kay el em en o pee cue ar</p> <p>[dʒei] [kei] [el] [em] [en] [ou] [pi:] [kju:] [aʊ/ər]</p> <p><b>S s T t U u V v W w X x Y y Z z</b></p> <p>ess tee u vee double-u ex wy(e) zed/zee</p> <p>[es] [ti:] [ju:] [vi:] [ˈdʌbəlju:] [eks] [wai] [zed/zɪ:]</p> | <p><b>A a B b C c D d E e F f G g</b></p> <p>ā bē cē dē ē efe gē</p> <p>[a] [be] [se] [de] [e] [efe] [ge]</p> <p><b>H h I i J j K k L l M m N n</b></p> <p>agá i jota cā efe eme ene</p> <p>[aˈga] [i] [ˈʒote] [ka] [ˈɛh] [ˈemi] [ˈeni]</p> <p><b>O o P p Q q R r S s T t U u</b></p> <p>ó/ó pē quē erre esse té u</p> <p>[ˈo/ˈo] [pe] [ke] [ˈeri] [ˈesi] [te] [u]</p> <p><b>V v W w X x Y y Z z</b></p> <p>vē dábilo xis ipsilon zé</p> <p>[ve] [ˈdabliu] [xis] [ˈipsilɔ] [ze]</p> <p>Vowels and diphthongs</p> <p>a, ā, ä, a, ä, ä e é ê i o o ô õ u</p> <p>[a] [ā] [æ/ɛ/ä] [e] [é] [i] [o] [o] [ô] [õ] [u]</p> <p>æ, ai ai ao, au ao ea, ia ei ei eo, io eu eu ie</p> <p>[æ] [ai] [au] [ä] [ia] [ei] [ei] [eo] [io] [eu] [eu] [ie]</p> <p>m oa, na oi oi ou oe uā uan- uan- ue ü ü</p> <p>[u] [ua] [oi] [oi] [ou] [oe] [uā] [uan-] [uan-] [ue] [ü] [ü]</p> <p>üen-üen(-) ü ünn(-) ünn(s) no -an -en -en(s) -en -ens</p> <p>[yē/ü] [u/ü] [yō/ü(s)] [u/ü] [ä] [ē] [ē(s)] [ē] [ē(s)]</p> <p>-én -ün -ins -on -on(s) -ie -nen-üen-ünn-ünn(s) -ün -uns</p> <p>[ē] [ü] [ins] [on] [on(s)] [ie] [nen-üen-ünn-ünn(s)] [ün] [uns]</p> <p>Consonants</p> <p>b c ç ch d f g gu gü h j</p> <p>[b] [k/s] [s] [ʃ] [d] [f] [g] [gʷ] [gʷ] [h] [j]</p> <p>k l lh m n nh p qu qü r, rr s</p> <p>[k] [l] [ʎ] [m] [n] [ɲ] [p] [kʷ] [kʷ] [r, r] [s]</p> <p>ss t v w x y z</p> <p>[s] [t] [v] [w] [x] [y] [z]</p> |
| <p><b>A a B b C c D d E e F f G g H h I i</b></p> <p>a bee cee dee e ef gee (h)aitch i</p> <p>[ei] [bi] [si] [di] [i] [ef] [dʒi:] [(h)entʃ] [ai]</p> <p><b>J j K k L l M m N n O o P p Q q R r</b></p> <p>jay kay el em en o pee cue ar</p> <p>[dʒei] [kei] [el] [em] [en] [ou] [pi:] [kju:] [aʊ/ər]</p> <p><b>S s T t U u V v W w X x Y y Z z</b></p> <p>ess tee u vee double-u ex wy(e) zed/zee</p> <p>[es] [ti:] [ju:] [vi:] [ˈdʌbəlju:] [eks] [wai] [zed/zɪ:]</p> | <p><b>Russian</b></p> <p><b>А а Б б В в Г г Д д Е е Ё ё Ж ж З з И и Й й</b></p> <p>a b v g d e/ye ä/yä ž/zh z i j/y</p> <p>[a] [b] [v] [g] [d] [je/e] [jo/o] [ʒ] [z] [i] [j]</p> <p><b>К к Л л М м Н н О о П п Р р С с Т т У у Ф ф</b></p> <p>k l m n o p r s t u f</p> <p>[k] [l] [m] [n] [o] [p] [r] [s] [t] [u] [f]</p> <p><b>Х х Ц ц Ч ч Ш ш Щ щ Ъ ъ Ы ы Ь ь Э э Ю ю Я я</b></p> <p>kh/h/x c/ts/tc č/ch š/sh šč/shch " y é/eleh ju/yu/ü ja/yaja</p> <p>[x] [ts] [tʃ] [ʃ] [ʂʂ/ʂʂʂ] - [i] [ɐ] [ɛ] [juˈu] [jaˈja]</p> <p>(Printed Form)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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|                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>Аа Аа<sup>ah</sup> Бб Бб<sup>beh</sup> Вв Вв<sup>veh</sup> Гг Гг<sup>geh</sup><br/> Дд Дд<sup>deh</sup> Ее Ее<sup>yeh</sup> Ёё Ёё<sup>yoh</sup> Жж Жж<sup>zh (as in vision)</sup><br/> Зз Зз<sup>z</sup> Ии Ии<sup>ee</sup> Йй Йй<sup>ee-krakbeuhhee (no sound)</sup> Кк Кк<sup>kah</sup><br/> Лл Лл<sup>el</sup> Мм Мм<sup>em</sup> Нн Нн<sup>en</sup> Оо Оо<sup>oh</sup><br/> Пп Пп<sup>peh</sup> Рр Рр<sup>er</sup> Сс Сс<sup>es</sup> Тт Тт<sup>leh</sup><br/> Уу Уу<sup>oo</sup> Фф Фф<sup>el</sup> Хх Хх<sup>ha</sup> Цц Цц<sup>be</sup><br/> Чч Чч<sup>chuh</sup> Шш Шш<sup>sh</sup> Щщ Щщ<sup>sh-ch</sup> Ъъ Ъъ<sup>hard sign</sup><br/> Ыы Ыы<sup>euhi (like you've been jabbed in the stomach)</sup> Ьь Ьь<sup>soft sign</sup> Ээ Ээ<sup>sh</sup> Юю Юю<sup>yu</sup><br/> Яя Яя<sup>ya</sup></p> <p>(Handwritten form)</p> |
| <p>A a B b C c D d E e F f G g H h I i<br/> a bee cee dee e ef gee (h)aitch i<br/> [ei] [bi] [si] [di] [i:] [ef] [dʒi:] [(h)entʃ] [ai]<br/> J j K k L l M m N n O o P p Q q R r<br/> jay kay el em en o pee cue ar<br/> [dʒei] [kei] [el] [em] [en] [ou] [pi:] [kju:] [o:/or]<br/> S s T t U u V v W w X x Y y Z z<br/> ess tee u vee double-u ex wy(e) zed/zee<br/> [es] [ti:] [ju:] [vi:] [ˈdʌbəlju:] [eks] [wai] [zed/zɪ:]</p> | <p>Български</p> <p>А а Б б В в Г г Д д Е е Ж ж З з<br/> а бь вь гь дь е жь зь<br/> [а/е] [b/р] [v/г] [g/k] [d/т] [e] [ʒ/ʒ] [z/з]<br/> И и Й й К к Л л М м Н н О о П п<br/> и и кратко кь ль мь нь о ть<br/> [ɪ] [j] [k/г] [l/л/л] [m] [n] [o/о] [p]<br/> Р р С с Т т У у Ф ф Х х Ц ц Ч ч<br/> рь сь ть у фь хь ць чь<br/> [ɾ] [s/з] [t/д] [u/о/у] [f] [x] [ts] [tʃ]<br/> Ш ш Щ щ Ъ ъ Ь ѣ Ю ю Я я<br/> шъ щъ ер голям ер малям ю я<br/> ʃ/ш ʃʉ/ʃʉt aʉ/aʉ ʉ/ʉ ju/ʉ ja/ʉ<br/> [ʃ] [ʃʉ] [y/е] [j/-] [ju/и] [ja/а]<br/> jo/o je/e</p> <p>Digraphs</p> <p>Дж Дж пш<br/> dʒh dz psh<br/> [dʒ] [dz] [pʃ]</p>                                                                                                                                                                                                                                   |

## RESULT AND DISCUSSION

Based on the above observations and comparative analysis, it can be concluded that languages serve as an effective medium for expressing ideas, emotions, and information in written form through the use of specific scripts, alphabets, and phonetic systems. Numerous languages are used across the world, employing different writing systems that reflect their historical and linguistic development. The scientific study of Language is known as Linguistics. The study of linguistics combined with Forensic Science to help solve cases is called Forensic Linguistics.

In the present study, two major writing systems, namely the Latin Script and the Cyrillic Script, were examined. The Latin script, which is used by more than 300 languages worldwide, includes Standard English along with French, German, Scots, Frisian, Dutch, Norwegian, Spanish, Italian, and Portuguese. The Cyrillic script includes Russian and Bulgarian mainly. Standard English was taken as the reference language for comparison because of its global importance and widespread use in communication, education, law, and international affairs.

The comparative study revealed that languages within the same script show close visual similarities in their alphabets and writing patterns but significant differences in their phonetic structure, pronunciation patterns, the number of vowels and consonants, diacritics and ligatures. Many languages that use the Latin script share the same alphabet as English, but give very different phonetic values to its letters. Languages such as French, German, Portuguese, Spanish and Norwegian use diacritical marks extensively to indicate particular sounds and pronunciation features that are not present in Standard English. Some languages have also adopted ligatures and special character combinations to denote unique phonetic sounds.

The analysis of the Cyrillic-script languages shows that, although the writing system of Russian and Bulgarian is visually different from the Latin alphabet, some characters have a resemblance to Latin letters in their appearance, e.g. M, O, T and C. But these letters have different phonetic sounds. Some Cyrillic characters visually resemble or mirror-like look (like 'R' looks like 'Я', etc.) compared to Latin characters. These similarities and differences are useful linguistic markers for script discrimination and language identification.

This study shows that comparing scripts, alphabets, phonetic sounds, vowels, consonants, diacritics and ligatures can help distinguish between languages that might look visually similar. These linguistic features can be useful parameters in the investigation of questioned documents.

The results of this research are of practical importance for the criminal justice system, forensic document examination and forensic linguistics. The comparative framework developed in this study can be used by investigators, forensic document examiners, linguists and law enforcement agencies to identify the language and script used in questioned documents, anonymous writings, forged documents, ransom notes, threatening letters and other documentary evidence. This can help in establishing the provenance and linguistic features of a document, which can in turn provide useful leads for investigation and evidential support. Therefore, the study can help in the efficient resolution of both civil and criminal cases and improve the role of forensic linguistics in the administration of justice.

## CONCLUSION

The present study compared Standard English with selected languages written in the Latin and Cyrillic scripts by examining their scripts, alphabets, phonetic sounds, vowels, consonants, diacritics, and ligatures. The findings show that many languages share a common writing system, although they differ significantly in their pronunciation patterns, orthographic rules, and sound structures. These differences contribute to the unique linguistic identity of each language.

The comparison of Standard English language with French, German, Scots, Frisian, Dutch, Norwegian, Spanish, Italian, and Portuguese revealed that languages using the Latin script share several alphabetic features but differ in pronunciation, phonetic inventories, the distribution of vowels and consonants, and the use of diacritical marks and ligatures. Similarly, the analysis of Russian and Bulgarian demonstrated that languages written in the Cyrillic script possess distinctive alphabetic and phonological characteristics. These findings indicate that the use of different scripts show similarities between languages and can be compared.

The study highlights the importance of linguistic features such as scripts, alphabets, phonetic sounds, vowels, consonants, diacritics, and ligatures in language identification and comparison. These features provide valuable insights into language structure, development, and diversity.

This work can cover vast area for investigation including Europe, Asia, America, Russia, France, etc. countries where any questioned document can be found in various different languages.

From a forensic perspective, linguistic analysis can play an important role in the examination of questioned documents, anonymous letters, ransom notes, threatening communications, and other documentary evidence. The identification of language-specific characteristics may assist investigators in determining the possible origin,

authorship, and linguistic background of a document. This comparison can help criminal justice system to understand that the document is written by the same suspected person or not or is from same native place or from any foreign country.

Furthermore, the research emphasizes the growing significance of Forensic Linguistics as an interdisciplinary field that combines linguistic knowledge with forensic science. The comparative framework developed in this study may assist forensic document examiners, investigators, law enforcement agencies, and judicial authorities in analyzing language evidence and supporting criminal investigations.

In conclusion, the study confirms that the comparison of languages based on script, alphabetic structure, phonetic features, vowels, consonants, diacritics, and ligatures is an effective method for distinguishing and identifying languages. The findings contribute to a better understanding of language diversity within Latin and Cyrillic writing systems and highlight the practical value of linguistic evidence in forensic examinations. Therefore, this research contributes to the fields of linguistics, forensic science, and the criminal justice system by providing a useful reference for language identification, document analysis, and crime investigation.

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