Cognitive Systematicity of Semantic Change: Cross-Linguistic Evidence

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Abstract
Banking on intrinsic generative assumptions of cognitive semantics, this paper is a humble attempt that specifically sheds light on some major aspects of overtly intricate yet covertly systematic interaction that steers our conceptual processing of inherent semantic and pragmatic changes. The basic premises of such cognitive operations stem from yet may exceed the limitations of Elizabeth Traugott’s and Eve Sweetser’s historical pragmatic approach that elaborately envisages such lexical changes as meaning relations with their metaphorically polysemous progress in light of relevant epistemic constraints that can help us decode ambiguous components of some functional and lexical categories. Therefore, this paper examines in principle how schematic lexical meaning can be cross-linguistically and cross-culturally handled and perceived in order to cater for an optimal matrix and some rule-governed clues and rules that may explain the internal universal design and flow of semanticity and pragmaticity in charge of such linguistic behavior. The data this study exploits and explores draw on some English and Arabic representative examples that can satisfactorily exhibit an interesting well-established cognitive mechanism that can reveal the role of Homo sapiens’ encyclopedic and collective faculty vis-à-vis such word processing; the data primarily encompass the English words silly, simple, innocent and naïve as well as their Arabic counterparts.

Keywords: Semantics; pragmatics; cognitive processing; Sweetser; Traugott; schemata; cross-linguistic evidence

1. Introduction
Linguistic change has predominantly occupied thousands and maybe millions of academic works since the advent of modern linguistics in various fields, especially phonology, morphology, syntax and semantics as it can be easily discerned in most historical linguistics studies. Similar abundant issues had been the core concern of most philological treatise and volumes for ages but the motivations are critically different in means and ends although they may look similar, (Hoenigswald 1960). On the one hand, philology primarily aims at spotting such sound changes and lexical history in order to attest some similarities and differences among language families and origins for a number of philosophical, religious or other historical reasons. On the other hand, modern linguistics has focused on studying such phenomena so that scholars can explain the pure linguistic operations and mechanisms. However, initial modern linguistics some decades ago can be deemed similar to philological studies in their time orientation since they are both directed towards diachronic aspects of change.

Many mainstream historical linguistics works took a shape of comparative linguistics in essence; they tried to investigate many etymological fields following different techniques and methods especially the comparative method and the internal reconstruction method; the former concentrates on studying resemblance of variants among world languages within specific time spans and how such common features constitute sets of cognates; while the latter hinges on analyzing all variants within each language as such, (see Stern 1932, Lehmann 1973, Robert and Lehiste 1979, et al). All in all, such variation was sometimes perceived as a process of evolutionary change, (see Samuels 1970). Nonetheless, most recent studies especially over the past four decades have confined their emphasis to investigating linguistic phenomena synchronically, particularly the bulk of studies in the fields of semantics and pragmatics, more noticeably research conducted by cognitive advocates, (see Traugott1990 and Sweetser 1990, Blank 1999, et al). Therefore, all research over the past two centuries can be typologically realized based on the major theoretical approaches and distinctions that language studies and linguistics have undergone when dominated by philologists, structuralists, generativists or functionalists. The results, therefore, reflect the solid premises such schools of linguistics have posited as evidently consequential outputs, starting with etymology, onomasiology, semasiology and semi-pragmatics, (cf. Fitzmaurice 2000 and Geeraerts 2010). This can be ambitiously further extended into some semiological spheres and paradigms of interpretations, (AlBzour 2015).

2. Data Collection and Methodology
Semantics is one of the most interesting fields of linguistics because it tackles multi-layered issues that can collectively work hand in hand while the process of communication as an essential goal of language functions is taking place, (Saeed 2003). The semantic elements and processes essentially involve user’s overall knowledge about his/her language. “Since linguistic description is an attempt to reflect a speaker’s knowledge, the semanticist is committed to describing semantic knowledge.” (ibid, 4). This kind of semantic knowledge can be by no means confined to mere
The four adjectives in question “silly, simple, naïve and innocent” have manifested and developed substantial degrees of similarity in their lexical meaning and their pejorative associations in modern English, though their origin proves to be different in their real world meanings. Banking on traditional semantics assumptions that deem such lexical items meaningful in light of their truth value, sense or referential content can be of little avail because “reference has to do with the relationship which holds between an expression and what that expression stands for on particular occasions of its utterance”, (Lyons 1977, 174), and this shows the rigidity of such semantic paradigms. Therefore, drawing on interdisciplinary cognitive semantics would be immensely conducive to highlighting and realizing the systematicity of this semantic change, and this in turn proves the claim of the congruent universality of cognitive mapping to a great extent, (see Sweetser 1990 and 2006). While scrutinizing the synchronic and the diachronic development of these words, the researcher was dazzled by the great semblance these words lend themselves a maximal degree, not only in English but also in Arabic. This can be a sort of hard evidence of human shared cognitive mapping of the real world features through symmetrically metaphorical associations, (Lakoff and Johnson 1980 and Lakoff 1987).

Therefore, it would be rather ‘innocent’ to consider this semantic issue from a ‘silly’ perspective of any ‘naïve’ dichotomy that can be merely confined to ‘simplistic’ realizations in terms of broadening vs. narrowing analyses because it goes without saying that human minds and intelligence are more complicated yet systematic than that primitive layout innocent interpretations, (Feldman and Narayanan 2004). The concrete cognitive domain these words belong to according to their attested etymology seems harmonious and almost universally porous in terms of directionality as they get transferred to an abstract mental domain, so logical conceptual mapping between the source domain and the target domain is predictable (see Holme 2004). Now, let us examine the first exciting example as it can be represented in diagram (1):
The word ‘silly’ according to OED, can be etymologically traced back to: Middle English sely, silly (happy), Old English sælīg, from sæl (happiness; and this can be akin to Old High German sālig happy). This can be an interesting example that reveals systematic complexity of semantic change. Thus, it can be noticed that silly originated to describe a neutral or a positive emotional state associated with utter physical appearance of facial expressions, i.e. smiling, and maybe auditory one, i.e. laughing in effect. Thus, it developed into simple and plain way of expressing one’s feelings of being happy. The simple emotional state reflected on the plain or inartificial physical movement tends be more generalized to map mental weakness of feeble brains that lack control over continuous body expressions like laughter that can reveal hysterical aspects of one’s personality. This lack of mental capacity is stereotypically extended to women and children in some cultures to be ‘silly’ because they were perceived mentally inferior to men. In the same vein, such silliness thus may apply to people who lack common sense and judgment.

The combination of mental and physical weakness has widened the circle of silly to metaphorically encompass a new sense which is ‘defenseless’ or ‘helpless’, especially when it refers to children, and this in turn has given rise to another meaning like ‘deserving pity. Consequently, the overall characteristics of absence of wisdom, lack of intelligence have driven such happy people to places called ‘silly houses’, i.e. ‘mental asylum’ which have become in turn frequently associated with ‘political asylum’. This kind of metaphorical interaction can unveil why seekers of political asylum might be described as ‘silly’ one day, thus retaining the original meaning of ‘happiness’ as a result of escaping persecution in their totalitarian or war-torn counties! Furthermore, the adjective happy itself is a good candidate to undergo such a pejorative association of stupidity and brainlessness sooner or later. Ultimately, silly has acquired some stigmatized social connotations of inferiority and humbleness of social rank, describing trivial persons. This triviality extends into inanimate objects as it can be found in some examples such as ‘silly questions’ or ‘silly seasons’ of newspapers.

Furthermore, silly as a noun and an adjective has entered the first stage of a grammaticalization processes which may explain the process of lexical birth and demise, (see Traugott and Heine 1991 and Heine 1993). This can be attested through what has been used recently in expressions like ‘laugh silly’ or ‘drink silly’ which may describe the conventionalized lack of mental state and thus right judgment; in other words, the state of intoxicated which is can result in happiness and lack of mental as well as physical control. At a later stage this usage has progressed to confine silly to an intensification function as an adverbial of manner. This means that silly in ‘drank silly’ has just been reanalyzed as an adverb expressing extremity or excess of anything, so we can hear expressions now a days like ‘scare silly’ and ‘bore silly’, i.e. extremely or very. Thus, one should expect that expressions like ‘don’t be silly surprised’ would be used in the future, so we should not be ‘silly surprised’ then!

To extend our analysis a little bit more, let us examine another related adjective, mainly the word ‘SIMPLE’ and try to relate this argument to the previous sections. When searching for synonyms for the word silly in many dictionaries and thesauri, readers are usually redirected to see the adjective simple. Etymologically speaking, simple can be navigatable back according to OED to Middle English; it came from Anglo-French and mainly Medieval Latin simplex which is an alteration of the Latin simplic which is equal in modern English to simplex single, having one ingredient or plain since the prefixal root sem- or sim- means one and the suffixal form -pli or -plex means fold. The development of this word into different denotatively and connotatively can be discernable by analyzing the concrete world into the less concrete domain or even the abstract one. Hence, the concrete aspects of ‘singleness’ vs. ‘amalgamate’ structure have been preserved in solid scientific contexts where human interaction is to a minimum, so we frequently use the expressions ‘simple vitamins’ in medicine and ‘simple sentences’ in grammar. On the other hand, this has noticeably developed in daily human interaction to describe people or situations without sophistication in a positive sense. Thus, it has undergone a process of amelioration in traditional terms, and it has been used to describe good human behavior to mean ‘free from guile’, ‘free from malice’ or ‘free from vanity’.

However, when used in a metaphorical sense and applied to the mental domain, ‘simple’ has started to acquire new pejorative shades of meanings to describe ‘simple-mindedness’ and ‘lack of intelligence’, which can be reanalyzed as a result of ‘lack of guile and vanity; and consequently ‘lack of ability to use discretion’, as if wisdom necessitated wickedness; and this systematically explains why the English adjective clever which is synonymous with intelligent has acquired negative senses as it can be used to mean cunning The metaphorical mapping extends to encompass the following formula: “if not sophisticated and evil, then one lacks wit and this entails that one lacks wisdom” and this ends up with one is silly and inane! Interestingly enough, the literal antonyms of the original word simple, i.e. the words “compound & complex”, as still used in scientific texts, have not yet evolved into the mental domain to mean intelligent or refined-minded, yet this has occurred in the case of sophisticated. On the contrary, the word complex has been applied to the mental domain when brain and psyche interact; thus complex drifted to pejorative psychological and mental connotations.

However, simple is still widely used in its neutral and even somewhat positive senses in many context, so both the original central and the peripheral meanings still co-exist, unlike the word silly where the primary meaning yielded to the new peripheral one; which in turn thought to be the only central meaning. It would never occur to anybody to say: “I am silly today” instead of “I am happy today” while “try to be simple” is still understood with its central positive meaning, unless the context proves the opposite. In addition, the derived form simpleton is a noun consisting of the adjective simpleton, and it is exclusively used in a pejorative sense for a person lacking common sense and discretion, and this pejorative behavior applies to the derived adjectival form simplistic. A rough presentation can be seen in diagram (2):
Furthermore, the etymology of the word naïve is French, and it is the feminine of naïf which is apparently a descendant from Old French inborn or natural that came from Latin natives, i.e. native. It seems predictable from the previous analyses of simple that humans tend to associate natural and unaffected things with pejorative connotations as if evil, artificial and sophisticated were the rule and the criterion according to which intelligence is measured. In this case, naïve is more logically predictable to be denotatively and connotatively drifting in this direction. Hence, it is natural to think of developing inborn/naïve to someone who behaves naturally, then into somehow a positive metaphor of ‘willingness to trust people’; then to describing someone who is ‘lacking enough experience’ and thus ‘lacking any wisdom’ because trusting people may lead one into trouble. Consequently, this has developed into a sense of credulity and gullibility.

On the other hand, inborn features and traits are usually associated with nature as opposed to sophistication and modernity; that is why naïve became synonymous with primitive and self-taught that may sometimes indicate lacking training and even being artless. Interestingly, art itself can be described as ‘naïve art’ which in turn means ‘plain and not sophisticated’! Likewise, the mapping of human lacking of experience, expertise and experimentation overlaps with applying the word ‘naïve’ to animals in scientific contexts as in ‘naïve rats’ which does not mean innocent, simple nor silly; rather it describes rats subjected to experimentation for the first time. This can be closely associated with a primary feature that ‘naïve people’ exhibit, i.e. having a particular experience for the first time too, which is often times deemed insufficient. However, it would be least likely that scientists who are trying to administer the experimentation on humans would call their subjects and their informants ‘naïve people’! This can be perceived diagrammatically in (3):

Etymologically, OED provides us with the story of the innocent adjective innocent, which dates back to the 14th century of Middle English and Anglo-French as it descended from Latin innocens, which consists of the prefix in- plus the root nocent, i.e. wicked. The root nocent belongs to the present participle of nocère, i.e. to harm — more at noxious. The obvious analysis of this word can show no discrepant predictions; this necessarily entails that if one is not wicked, then he/she is simple → naïve → and ultimately, silly maybe. Therefore, harmlessness as a positive trait of good humans has naturally developed into religious ‘sinlessness’ and thus ‘holiness’ in a sense. Then it has moved into the other direction of ‘guiltlessness’ because it describes people with no evil, so they are innocent of any charges, felonies or crimes.

These emotional and physical aspects of harmlessness and guiltlessness are still the central components of meaning of the word innocent, but some other peripheral meanings have emerged. Therefore, the cleanliness of one’s heart or of one’s hands of any evil or criminal act has been first mapped into spotlessness and stainlessness. Again and again, this has systematically evolved into having no cunning nor any artifice, which in turn exemplifies candidness that shows guilelessness that entails ingenuousness as a result of simplicity that is a sign of naïvety that usually boils down to lack of intelligence that can end up with how one can be easily beguiled and fooled by clever people!

In addition, it is really exciting to see how this word tends to gradually undergo a process of morphological reanalysis in its prefixal (in-nocens) force rather than of its whole propositional content. Hence, harmless can be reanalyzed as free from harm or devoid of harm or moral wrong, i.e. devoid of guile and malice, and thus devoid of intelligence; also devoid of stains in stainless. Thus innocent has ended up with a prepositional meaning similar to the preposition
3.2 Cross-linguistic Evidence

Arabic is one of the most well-examined languages through the past millennium. Semantic studies have been launched in Arabic linguistics almost since the beginning of the 8th century. Unfortunately, almost all studies that have approached such semantic shifts in these areas have gone in a philological spirit for ages. In the twentieth century, Arab scholars tended to mimic the European linguistics traditions, so onomasiological and semasiological concerns were still saliently dominant; thus most of these studies have tackled conventional issues like lexical relations and lexical fields especially synonymy, antonymy, homonymy and polysemy. The Bloomfieldian and the Firthian impacts are undeniably prevalent in the crux of all argument, (see Mubarak 1972)

For the sake of brevity, let us examine the Arabic data that can offer cross-linguistic evidence in relation to our previous analysis of the English data. The goal at this stage is not to hold a contrastive or a comparative discussion by any means; rather, the researcher is trying to succinctly present how a similar cognitive mechanism is always in action everywhere. The data at hand consists of the same number of lexical items used in the English data, mainly, the Arabic words saxeef, baseeT, saaThaj and baree? that somehow correspond to the English silly, simple, naive and innocent. Typically, as a Semitic language, Arabic lexical meaning hinges upon the schematic morphological structure of roots that can be derivationally and inflectionally generated following fixed patterns. The triconsonental root is the most dominant source of such coinage and creation processes where internal alternations vowel often guarantee the lexical category and the semantic content of any Arabic word.

Unfortunately, Arabic dictionaries and lexicons do not offer any satisfactory linguistic data in their specific linguistic and historical contexts, not even etymologically. Among the best couple of Arabic dictionaries, scholars can find “Lisanu Al-Arab” (LA), “AlQamoos AlMuHeeT” (QM), which was reproduced and annotated as “Taj Alaroosand” (TA) and recently “AlMu?jam AlWaseeT” (MW). The first two are classic references that were compiled about seven centuries ago; they conventionally and primarily present formal Standard and classical Arabic, while the latter was a relatively recent work that was compiled by the Arab Academy in Cairo around the middle of the twentieth century to handle the gap between classical Arabic and modern standard Arabic. The content of AlMu?jam AlWaseeT and many other modern dictionaries is more simplified in quality and quantity than ancient ones, but the mechanism and the approaches are almost similar in their insufficient and even very poor philological and quasilinguistic orientations, (AlDayeh 1988).

To proceed with, the first member in this set of data, i.e. saxeef can be simply analyzed into its triconsonental root (s+i+T) and the result can be a big number of lexical items that differ not only in word class but also in many other respects such as case, number and gender in addition to what each new word can semantically encode in terms of agenhood, patienthood, causality, etc. According to LA, the verbal stem saxufa is originally used to describe anything or anybody that tends to be lighter, thinner, gentler or weaker, so clouds, grass, clothes and bones can be described as saxeef or saxufa when their physical appearance encodes a sense of weakness or any relevant lack of structural magnitude. Therefore, this weakness can be ascribed to our bodies when weakened by lack of nutrition and hunger; clothes can be similarly described when their texture or fabric gets almost worn out; grass when it starts fading in color and withering. However, these sensory-motor concrete aspects of feebleness systematically move from the physical domain into the mental domain to frequently describe intellectual and mental deficiencies that can be envisaged when people suffer thinness, weakness or lightness in their minds, and thus in their ability to take any feasible or wise judgments because of presumable lack of wit.

The root “b+i+T” and all its derivative forms in LA and all modern dictionaries can reflect an interestingly wide spectrum of positive meanings that describe physical states or appearances of referents whether animate or inanimate. Therefore, baseeT and other derived nominal and adjectival forms can express positive traits of evenness, flatness and simplicity of structure. Such adjectives can refer to dozens of concrete objects such as hands, faces, tongues, ground, surfaces, etc. This usage has developed in a very similar way to the English word simple, so it has been treated as an opposite to anything that can be physically of some complications, complexities, vagueness or difficulties. No wonder then that it ends with “su’aal baseeT”, “mushkila baseeTa” and “imtiHan baseeT”, i.e. a simple question, problem and exam, respectively. The cognitive processing of “baseeT” has been extended to map the emotional domain to describe
The third member in this Arabic set is saThaj or saThij which is closely equivalent to the English naïve and silly. In fact, most lexicographers believe that this word, which is tailored by virtue of infixing the root “s+TH+j”, is etymologically a borrowed Persian form; however, it has been in use for centuries. According to LA an Ta, the adjectival or the nominal form is used to describe single-colored objects, or things without hair; and this can be the reason why it has been also used within the same physical domain to refer to some objects without any decoration or ornamentation. In a similar logical fashion, it has acquired some central mental associations, and thus it can be rendered as a way of expressing a negative attitude towards any argument that lacks hard evidence and cogent analyses; then it mapped into any superficial talk or any person whose discourse is less persuasive and ultimately nonsensical, evidently for the same reasoning that deems simplicity a matter of naivety and imbecility.

Finally, the Arabic root (b+r+? ) of baree? and most of its derived verbal, nominal and adjectival forms seem to behave in many cases almost like a replica of the Latin root innocens. The inherent meaning of “being void of inappropriate, inconvenient and undesirable attributes or activities” characterizes such lexemform forms. Therefore, such derived words can be used to typically mark cleanliness, irresponsibility and invulnerability in contexts such as crimes, charges, diseases, stigmas, sins, etc. These positive instances within the physical domain have been conceptually transferred to serve similar positive functions in the mental and psychological domains as signs of acquitting the person in question of any wicked thought, so they automatically matche senses of acquittal because the inherent meaning always entails “being guilt-free”. Paradoxically again, being unharmed and unwicked has been interpreted as a corollary to absence of malice and thus shortage of reason and so weakness of mental faculty. A person with such traits can be easily deceived and fooled because he/she would never mistrust others.

To add some extra generative value to our previous analyses, it would be of some significance to examine another example that does not belong neither to Arabic nor to English, nor does it belong to the same physical or mental domains of our previous data. One classic example that the researcher used to discuss with her students in this connection is megbé in Ewe, an African indigenous language as presented by Traugott and Heine (1991) and others. One can discern the semantic changes that the word megbé has undergone between apparent broadening and paradoxical narrowing as the fully fledged word has become like a preposition in traditional terms through systematic processes of metaphorical, metonymous and grammaticialization interaction, so the meaning of this word has developed and the word has acquired new different meanings as it has exhibited the ability to be mapped into different domains.

This can be subtly conceptualized in the following brief argument. First, the word has retained its central meaning as a fully fledged lexical item or noun ‘back’ which referentially means a physical entity a body part. One cannot tell based on these data provided by Traugott and Heine (ibid) whether this specific part of the body has extended through metonymy to capture the whole rear part of the body as opposed to one’s front part as it is manifested in the first sentence: (epe megbé fa) = “His back is cold”. Yet, this choice would be plausible. One can notice also how megbé is positioned before the verb and pre-modified by the possessive pronoun. Second, retaining its form as a full lexical item, this concrete entity metaphorically developed into another new concrete meaning as a spatial adverb of place denoting directionality as expressed in (e-no megbé) = (”He stayed back”. Notice how megbé is post-positioned after the verb as a post modifier adverb. Third, this adverb has undergone a process of grammaticialization and has been reanalyzed and used as a mere preposition with another noun in a prepositional phrase as it can be seen in the sentence (e-le x a megbé) = (“he is behind the house”), yet it maintains the somehow concrete spatial reference.

Fourth, this concrete chain or channel of meaning has extended into another domain, i.e. the temporal domain as a full adverbial lexical item denoting time reference as it appears in this sentence: (e-dzo le nududu-a pe megbé) = (“He left after eating”). Fifth, the same process of grammaticialization that happened to the adverb of place happened to the adverb of time; thus it is reduced within the same temporal domain into a cliticized preposition of time as stated in the following sentence: (e-ku l e- megbé) = (“He died after him”). Sixth, another drastic shift has occurred in the epistemic domain as a result of metaphorical reanalysis of the spatio-temporal adverb into the mental domain. This backness has moved into backwardness of space and time, then into dull and ultimately has been metaphorically associated with mental retardation as it can be figured out in this sentence: (e- tsi megbé) = (“He is dull/mentally retarded”), Heine (1993).

Logically enough, a person who is physically remaining/lagging behind can be paradigmatically lagging behind in terms of his mental faculty. In fact, this can reveal a systematic human tendency shared by different languages and cultures because the word “back” in Arabic and in English, to some extent, has demonstrated an interestingly similar semantic development and interaction. Such linguistic phenomena cab be by no means incidental and peculiar to one language or a group of languages as such; rather, they must be following certain rule-governed patterns that can best characterize our cognitive behavior that can never exist or operate in vacuum.

4. Conclusion

In conclusion, it is pretty discernable that only two out of four lexical items, namely, simple and innocent have fully preserved their original meaning as a central meaning although other peripheral meanings are context-bound and are candidates to be dominant too. The other pair of words, i.e. silly and naïve have lost their originally deeply-entrenched
meanings to some extent, yet the other peripheral senses have become evidently more central to the usage of these words in daily discourse. This applies to the Arabic data as well, where resultant pejoration has subdued all other positive features encoded in all these words except in the case of baree? that still enjoys some salient positive denotations and connotations over negative ones. In the final analysis, we can coherently notice that these data can manifest how such words have undergone various conceptual processes through a dynamic mapping mechanism that can elegantly help us fathom all metaphorical indications, associations and implications such words have acquired and thus language and language users in general exploit; and thus how such words have ended up with a wide spectrum of possible and predictable meanings in English and in Arabic. Such symmetrical mapping strategies can be identified cognitively as a result of meaning radiation, meaning infusion and diffusion, not simplistically as a process of a melioration or pejoration because the latter can only describe the surface level of performance while the former can characterize and explain the underlying motivation and mechanism that our competence cross-linguistically may generate individually and collectively. Therefore, deeper and more comprehensive future cross-linguistic studies in this field can sustain and enhance the validity of the assumptions and the analyses presented in this research.

References
Arabic References


