Is there such a thing as areal semantics, and if so, can we distinguish between plausible and implausible semantic change/associations in the Southeast Asian linguistic area? ¹

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The short answers to the two questions in this long-winded title are: "yes" and "maybe so" - but perhaps a little amplification is necessary.

I. Semantic associations

What constitutes a "semantic association" between points A and B in semantic space? I believe these associations are basically of three types:

(1) The same morpheme in a given language has both meanings A and B, either synchronically (polysemy) or diachronically (via semantic shift or "glissement sémantique").

CARDINAL
< Lat. cardo (gen. cardinis) 'hinge (of a door)' --> 'most important part, most important members of a class' (e.g. cardinal numbers, cardinal directions², cardinal sins³) --> 'prince of the church, chief prelate' --> 'bird with brilliant red plumage' (via association with the crimson robes of a cardinal) --> 'member of the St. Louis baseball team' (the emblem of which is the cardinal bird).

(2) Reflexes of the same etymon mean A in Language X but B in Language Y.

INSECT / LAC / PINE-TORCH
Proto-Tibeto-Burman (PTB) *s-grep (Benedict 1972:#347) is reflected by forms in many TB languages that refer to species of insects, e.g. Jingpho šakrep 'bug'; Nung rap 'lac insect', rip 'flying ant'; Proto-Kiranti *khrep 'ant'. The secretions and ground-up bodies of the 'lac insects'⁴

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²Cf. the expression quattuor cardines mundi 'the four cardinal directions' (Quintilian).

³It is amusing to note that the name of the current primate of the Philippines is Jaime Cardinal Sin.

⁴Any of various insects of the subfamily Lacciferinae, especially Laccifer lacca.
living in the bark of certain resinous pine-trees yield a sticky substance used in making shellac, as well as a red dye called cochineal, so that Written Burmese khrip means 'lac; cochineal'. Lahu has undergone a semantic development in a different direction: the cognate a-kĩ has come to mean 'pitch-pine tree; pine torch' (used to light one's way after dark).

RECEIVE / TAX / DOCTRINE
Proto-West-Semitic *q-b-l 'receive' > Arabic qabāla 'tribute' > Old French gabelle 'salt tax'. The same Semitic root > Hebrew qabbāla 'received doctrine' > 'esoteric doctrine' (Eng. cabala, kabbalah).

The following example illustrates both (1) and (2):
blind / blemish / equitable compensation for damage / intermediate
Proto-West-Semitic ***-w -r 'be(come) blind' > Arabic IPHER O'blish', IPHERI va 'damaged goods' > Old Italian avaria 'customs duty' > OF averie > OE aver 'charge above the cost of freight' > Mod. Eng. average (Legal) 'incurrence of damage or loss of a ship or cargo at sea; equitable distribution of such a loss among concerned parties' ---> (Math.) 'intermediate'

(3) The co-constituents in a compound each have an association with the meaning of the compound as a whole. See Figure 1.

Figure 1. Association via compounding

1.1 Heuristic distributional classification of semantic associations

Naturally any classes we might propose are idealized, provisional, and porous; usually we lack the necessary information to decide difficult cases. A perfect classificatory scheme would imply that we had recorded all semantic associations in all the world's languages.

At first I thought I would operate with a fourfold classification, or tetrachotomy -- but that sounds ominously like a tracheotomy -- so a five-way classification, or pentachotomy, seems preferable. See Figure 2.
"Parallel but independent" associations can verge on the "universal", if they are extremely widespread, though as Greenberg (1963) has taught us, universality is a statistical notion.

1.2 Idiosyncratic semantic associations

In favorable cases, we can show that a particular metaphorical or metonymic association can only be understood within the context of the language/culture which produced it, or which has so far only been attested in a single language. Of course any claim to idiosyncrasy can be instantly demolished when somebody finds a parallel example elsewhere. Good candidates for idiosyncratic status include the following assortment of examples:

- English **toast**
  GRILLED BREAD ---› LIBATION
  The association here is via the Elizabethan custom of floating bits of grilled bread in their wine on especially festive occasions.

- French **EAR** ---› SLEEP
  French: *oreille* 'ear' ---› *oreiller* 'pillow'; *dormir sur ses deux oreilles* 'sleep soundly'
  ("sleep on both ears") Neither English nor the other Romance languages seem to have such an association.

- Jingpho **myìt kàbùn dùm** 'vacillate, be indecisive' < myìt 'mind' + kàbùn dùm
  'sound the 3 gongs for the death-dance; perform the death-dance' (done every day in the house of a recently deceased person, until his soul is sent off to the land of the ancestors). The metaphor is based on the fact that this dance involves much swaying from side to side - an exteriorization of the notion of mental vacillation. (See JAM 1986:47.)

- Lahu **phì-qhè-là?-no**
  DOGSHIT + FINGER ---› INDEX FINGER
  < phì-qhè 'dogshit' + là?-no 'finger'. The association is via the size and shape of the finger.

- Qiang **SALT + STEAL(er)** ---› BAT
(Longxi dial.) $tshí$-qù-mù; (Taoping dial.) $tshí^{55}χkə^{33}mə^{33}$ [tshí / $tshí^{55} <$ PTB *tsa 'salt'; qù / $χkə^{33} <$ PTB *r-ku 'steal'; mù / mə^{33} 'noun suffix'] (See Evans 1999.) Evidently the Qiang believe that bats are especially fond of salt, and will go to any lengths to get it.

- **Manange**
  
  NOSE + WATER ---> DOG
  
  'nä 'nose' + 'kyu 'water' ---> 'nakyu' 'dog'. Healthy dogs have wet noses.

- **Kokborok**
  
  PENIS + FRUIT ---> BANANA
  
  th-ə-li 'banana' < bəthay 'fruit' + bəloy 'penis'. Although I have so far not encountered this association elsewhere, it seems so natural that new data will probably cause it to be moved into the "parallel but independent" class (below 1.31).

- **Gnau**
  
  GRASSHOPPER/CRICKET ---> FONTANELLE
  
  The association is via the cricket-like jumping pulse of the fontanelle's membrane when the infant coughs or sneezes.

- **Japanese**
  
  THREAD + MOUTH ---> CLUE TO A SOLUTION
  
  < i 'thread' + kuchi 'mouth'. The metaphorical image is the unravelling of a tangled ball of thread. Cf. expressions like shussei no itoguchi to naru 'be the first steps towards one's success in life'

- **Japanese**
  
  DRAGON + LOVE-CHILD ---> SEAHORSE
  
  < tatsu 'dragon', otoshigo 'child born to a nobleman's mistress'. The anomalous, non-fishlike appearance of this creature makes it look as if it were engendered by mistake, perhaps as the result of an extracurricular sexual escapade by a dragon.

- **Japanese**
  
  BARCODE + OLD GENT ---> BALDING GUY
  
  This brilliant new coinage is applied to a man who attempts to hide his baldness by a bad "comb-over".

- **Japanese**
  
  GOLDFISH + SHIT ---> GROUPIE
  
  Another inspired coinage, referring to a servile devotee or "groupie", who trails behind his/her idol the way droppings trail behind a goldfish in its bowl.

- **Lahu**
  
  MISTRESS OF THE HOUSE ---> HOUSE-LIZARD
  
  See Figure 3, and JAM 1991a:391-2, 1991b:331.
1.3 Semantic associations paralleled elsewhere

1.31 Parallel but independent associations

Associations of this type are so "natural" to human thought processes that they have been made independently in genetically and geographically unrelated language families. A few examples:

· **FIRE** + **TONGUE** \[\rightarrow\] **FLAME**
  This metaphor is found widely in Southeast Asian language families (e.g. in Khmer, Malagasy, Yao/Mien, Jingpho, Lahu), but also crops up elsewhere, in fact throughout the world: Swahili ndimi za moto (p.c. L. Abdulaziz), English tongues of flame, French les flammes lèchent ("flames lick"), etc.

· **BAG** + **CARRIER** \[\rightarrow\] **TOADY**/"GO-FER"
  Italian portabursa (carry + bag) / Japanese kaban-mochi (bag + carry).

· **FIRE** + **MOUNTAIN** \[\rightarrow\] **VOLCANO**
  Chinese hǔoshān and Japanese kazan, both written with the same characters (火山), with the latter borrowed from the former. But the same formation occurs on the other side of the world, e.g. Icelandic elfjall.

· **HORN** \[\rightarrow\] **CORNER/ANGLE**
  Both in Indo-European (PIE *kɛr-no* underlies both Eng. horn (< Proto-Germanic *hornaz*) and Eng. corner (< Old French, ult. < Lat. cornū), and in the E/SE Asian

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8Nothing is more common than viewing the world in terms of bodypart metaphors. See, e.g. Kurath 1921; Friedrich 1969; Matisoff 1978.
linguistic area, e.g. Chinese 角 [Mand. jiǎo] 'horn; corner, angle'; the same character is used in Japanese both for tsuno 'horn' and kado 'corner'; PTB *g-run/k 'horn; corner, angle'.

A number of these widespread associations are grounded in what one might call "botanical universals":

*CABBAGE + FLOWER ---> CAULIFLOWER*
Eng. cauli- (≈ kale ≈ cole (slaw) < Lat. caulis 'stalk of plant; cabbage'; French chou 'cabbage', chou-fleur 'cauliflower'. Lahu ǧ3-cá 'cabbage', vê? 'flower', ǧ3-cá-vê? 'cauliflower'.

*GROUND + BEAN/NUT ---> PEANUT*
Eng. groundnut (chiefly British and South Atlantic U.S.) = peanut ; Lahu mì-n§? 'peanut' (< mì 'earth' + n§? 'bean').

*SUN + X ---> SUNFLOWER*
(Indo-European) German Sonnenblume (Sonne 'sun' + Blume 'flower'); Russian podsolnecniček (< solnte 'sun'); French tournesol (tourn 'turn' + soleil 'sun'); Yiddish zunroiz (zun 'sun' + roiz 'rose').

(Asian) Burmese ne-kra (ne 'sun' + kra 'lily'); Lahu mû-ni-ha-pa-ku-vê? (mû-ni 'sun', ha-pa 'moon', vê? 'flower'); Thai dûok-tha-an-towan (dûok 'flower', thaan 'withstand', towan 'sun').

Similarly widespread associations may be found with verbal roots:

**HANG (LOOSE) ---> DEPEND**
Eng. -pend is a xenomorph from Latin pendere 'hang' (cf. also suspend, perpendicular, impend, append, etc.). Other European languages have similar abstract developments from the notion of hanging, e.g. German hängen 'hang', abhängig 'dependent', Unabhängigkeit 'independence'; Russian vešatj/povesitj 'hang', visetj 'be suspended', zavisesitj 'depend', nezavisimostj 'independence'.

The Lahu verb cû (< PTB *m-dyu-k)10 in the physical sense means 'hang loosely'; figuratively it means 'depend on (as a fish depends on water, or a Christian on Jesus)'.

**CUT ---> DECIDE**
<table>
<thead>
<tr>
<th>Lahu</th>
<th>cut/sever</th>
<th>decide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jingpho</td>
<td>phràt; tōŋ</td>
<td>myít phràt; myít tōŋ</td>
</tr>
<tr>
<td>Burmese</td>
<td>phrat</td>
<td>cît pûñ-phrat</td>
</tr>
<tr>
<td>Chinese</td>
<td>duàn</td>
<td>duàn-diŋ; jüé-duàn</td>
</tr>
<tr>
<td>Thai</td>
<td>tāt</td>
<td>tāt-sîn-caj</td>
</tr>
<tr>
<td>Hmong</td>
<td>txiav</td>
<td>txiav siab</td>
</tr>
<tr>
<td>Japanese</td>
<td>kiru</td>
<td>omoikiru</td>
</tr>
</tbody>
</table>

9Cf. DAY + EYE ---> DAISY, below 2.2. The sunlike appearance of the flower's center is usually the basis for the association; in some languages (e.g. French, Thai) this appearance seems to have suggested that the flower is heliotropic.

10See JAM 1989.
GET/OBTAIN <----> HAVE TO <----> MANAGE TO <----> ABLE TO

See §III below, "Southeast Asian lexico-semantic areal features", and Fig. 4.

**Figure 4. Semantic extensions of GET / OBTAIN**

COPULA <----> GOD
Proto-Sino-Tibetan *-way ≠ *-ray 'copula'; *g-ray 'Supreme Being'. Cf. the Hebrew tetragrammaton YHWH 'God, Yahweh' < HWH ≠ HYH 'to be'.

See JAM 1985 and Figure 5.
1.32 Parallel semantic associations due to common genetic inheritance

This category -- perhaps the most difficult to instantiate -- comprises associations that are found in more than one language, but only within one or more subgroups of a certain language family, and not elsewhere in the linguistic area to which the family belongs. The claim that a given semantic association is peculiar to one language family is of course instantly refuted once the same association is found in a different language family of the area. If this turns out to be the case, the association becomes a candidate for areal status.

*C. Semitic *ʔ-d-m  
HUMAN BEING ---> BLOOD ---> RED ---> EARTH
Cf. Hebrew ʔādām 'human being' ⚫ dām 'blood' ⚫ ʔādōm 'red' ¹¹ ⚫ ʔādāmā 'earth'.

*C. Semitic *g-b-l  
MOUNTAIN <---> BORDER
Cf. Arabic jābal 'mountain' / Hebrew gyul 'border'

¹¹Sino-Tibetan seems to have the BLOOD <---> RED association (cf. WT khrag 'blood' / Chinese 赤 OC Tjāk 'red'), but not the others.
An association EGGWHITE ---/> MOON has been reported for Hmongic by Martha Ratliff (p.c., ca. 1997). WHITE ---/> MOON is attested elsewhere (e.g. Heb. lovaga 'moon', lit. "the white one (fem.)"), but the ovoid association may well be unique to Hmongic.

Tibeto-Burman MIND + DIE ---/> SETTLED/SERENE
A candidate for unique TB status is the metaphorical extension of 'die' to mean 'settled/stabilized', or even 'satisfied/serene', in the combination MIND + DIE:

Lahu sâ 'die', ni-qhâ 'viewpoint', ni-qhâ sâ 'come to a meeting of minds, be satisfied';
Burmese se 'die', cit 'mind', cit se-wap, cit se-sat (sat 'kill') 'be quietly settled in mind;
steady in purpose and conduct'; Jingpho sâ 'die', myit 'mind', myit sâ 'be satisfied; content
to let things be as they are'; Lai Chin thi 'die', kalan 'my heart', kalan othi 'my mind is
made up'. Lahu sâ, Burmese se, Jingpho sâ, Lai Chin thi are all cognate, < PTB *say.

Yet further investigation reveals that this association is actually areal. In Hmong, as
in many other SEA'n languages, the locus for psychological phenomena is deemed to
be the liver (White Hmong siab), not the heart or mind, and the collocation tuag siab
(DIE + LIVER) means 'be totally satisfied with' (Jaisser 1990:171).

On the other hand, this same combination of morphemes in Chinese means
something quite different.12

Tibeto-Burman PIG + INTESTINES ---/> SCREW
I was at first delighted when I ran across Jingpho wô?wâ and Pa-O Karen wék-tû 'screw',
since their first syllables looked like an excellent match with Lahu 3-vê? 'id.', for which I then had
no etymology. Could this be a precious example of the rare PTB rhyme *-ek? But the screw is
hardly an artifact of any great antiquity, and it would be prima facie implausible that a root with
such a meaning could have existed in PTB. The truth quickly became apparent. The modern
Burmese form for 'screw', wô?wû (WB wak-kû), the obvious source from which Jingpho, Pa-O,
and Lahu borrowed these words, means literally "pig-intestine". The semantic association is the
squiggly corkscrew-like appearance of a pig's small intestine. This etymology is also interesting
from the viewpoint of distinguishing native vs. borrowed co-allofams. The usual, native words for
'pig' in Jingpho and Lahu are wâ? and vâ?, respectively; but the doublets borrowed from Burmese
have front vowels, as in spoken Burmese. Unless a native speaker of Jingpho knows Burmese,
s/he is unlikely to realize that the first syllable of wô?-wû means 'pig', especially since this syllable
is in the high-stopped tone, while 'pig' is low-stopped. The native Lahu speaker is even less likely
to recognize the source of 3-vê?, since the morpheme for 'intestine' has been completely dropped
from the original Burmese compound,13 rather like the way our word camera (< Lat. 'room;
chamber; vaulted enclosure') is a shortening of the old compound camera obscura ("dark chamber")14.

12See below 2.2, "Cross-linguistic similarities and differences."
13The Lahu cognate to WB 7u 'intestine' is yû (usually in the compound 3-yû-tê?).
14There is a difference in detail between the two cases, however: the deleted 'intestine' is the head of the compound
"pig-intestine", but the deleted obscura is the modifier in the collocation "dark-chamber". Interestingly the same
semantic association is to be found with another TB root for 'intestine', *riil (> e.g. Lushai riil 'intestine', Darang Deng
hu-ci 'screw').
Two more semantic associations which seem peculiar to TB are discussed below (2.3) in the context of cross-linguistic similarities and differences: EARTHWORM \(\leftrightarrow\) TESTICLE and BIRD + WATER \(\rightarrow\) EGG.

### 1.3.3 Parallel semantic associations due to areal influence

In their study (1986) of Meso-American areal features, Campbell, Kaufman, and Smith-Stark listed 55 semantic associations (compounds, metaphors, polysemes) that are characteristic of the "Meso-American linguistic area", and that in fact help to define that area in opposition to outside languages (e.g. those of the South American area). See Figure 6.

| 1. door: mouth of house | 30. bladder: house (of urine) |
| 2. bark: skin/back of tree | 31. vein: road (of blood) |
| 3. knee: head of leg | 32. canine tooth: dog-tooth, snake-tooth |
| 4. wrist: neck of hand | 33. molar: grindstone (metate) |
| 5. calf: excrement/belly of leg | 34. edge: mouth |
| 6. eye: fruit/seed/bean of face | 35. thumb: mother of hand |
| 7. bile: bitter | 36. mano (of metate): hand/child of metate |
| 8. finger: child of hand | 37. poor: orphan, widow |
| 9. boa constrictor: deer-snake | 38. rainbow: snake, cougar, turtle, squirrel, or weasel |
| 10. moon: grandmother | 39. otter: water-dog, water-fox |
| 11. ring: coyol palm-hand | 40. cedar: god tree |
| 12. witch: owl, sleep(er) | 41. medicine: liquor, poison |
| 13. cramp: (associated in some way) with deer | 42. to cure: to suck (to smoke) |
| 14. fiesta: ceremony: (big) day | 43. patazie (non-domesticated cacao): tiger-cacao (jaguar-cacao) |
| 15. root: hair of tree | 44. town: water-mountain |
| 16. twenty: man | 45. foot: nose/mucus of fire |
| 17. lime: (stone-ash) | 46. to write: to paint, to stripe |
| 18. egg: stone/bone of bird | 47. to read: to look, to count, to shout |
| 19. wife: intimately possessed 'woman' | 48. alive: awake |
| 20. porcupine: thorn-opposum, thorn-lion, thorn-pecary, thorn-pig | 49. son and daughter: man's are distinguished, but a single term for woman's |
| 21. cougar: red jaguar | 50. head: bottle gourd (tecomate) |
| 22. antaeater: honey sucker, suck-honey | 51. thirst: water-die |
| 23. to kiss: to suck | 52. need: want, be wanted |
| 24. to smoke: to suck | 53. enter: house-enter |
| 25. branch: arm (of tree) | 54. cockroach: contains the root for 'house', often compounded with 'in' or something equivalent |
| 26. to marry: to join, to find | 55. feather: fur |
| 27. gold/silver: excrement of sun/god | 56. eclipse: eat the sun/moon; the sun/moon dies; sun/moon to rot |
| 28. eclipse: eat the sun/moon; the sun/moon dies; sun/moon to rot | 57. poor: orphan, widow |

**Figure 6. Meso-American areal semantic features (Campbell et al, 1986)**

Nevertheless, at least a dozen of these typically Meso-American features are found in East/Southeast Asia or other areas of the world:

4. wrist: neck of hand. Also in TB, e.g. Tangsa yak 'hand', tuk 'neck' \(\rightarrow\) yakluk 'wrist'

5. calf: belly of leg. Cf. Greek-derived gastrocnemius 'muscle of the calf', gastér 'stomach'; also the large TB word-family comprising *p*am 'belly', *bwam 'swell/swollen', and *bop 'calf of leg' (JAM 1978:124ff.)

6. eye: fruit/bean of face. Many TB compounds are of this type, e.g. Lahu mēʔ-šī 'eye', šī 'fruit; small found object'
7. bile $\leftrightarrow$ bitter. The same association is found in ST: *b-ka-n 'bitter' $\rightarrow$ Bodo-Garo kha 'bitter', bikha 'liver'; Haka hniit-kha 'bile' (hniit 'gall bladder'); OC k'o 苦 'bitter' $\not\approx$ k'an 肝 'liver' ("the bitter one")

8. finger: child of hand. This is found throughout East and SE Asia. See §III below.

23. kiss $\leftrightarrow$ suck. Also common in SEA, e.g. PTB *dzopa with reflexes meaning 'kiss/suck' in Chin and Bodo-Garo languages (e.g. Dimasa, Lushai, Thado, Siyin; see Benedict 1972 #69).


28. eclipse $\leftrightarrow$ eat the sun/moon. Cf. Lahu lâ mû-ni câ ve 'solar eclipse' ("tiger eats sun"), ha-pâ pã câ ve 'lunar eclipse' ("frog eats moon").

35. thumb: mother of hand. Found throughout East and SE Asia. See §III below.


47. read $\leftrightarrow$ count The same association holds for Lahu go 'count; read', and is also widespread in Indo-European (e.g. Russian čislo 'number', čislitj 'to count', čitâtj 'to read')

55. feather $\leftrightarrow$ fur Typically TB languages have the same morpheme for 'body-hair', 'fur' (of mammal), and 'feather (of bird)', with the latter meaning usually made more specific by compounds meaning "bird-hair": e.g. Lahu mu 'body-hair, fur', ñá?-mu 'feather' (ñá? 'bird').

Such extra-areal parallels by no means invalidate these semantic associations as Meso-American areal features. Rather they indicate that these features must have developed independently in widely separated linguistic areas that had never been in contact. While we can hardly assume that this makes them "universal", at least they are "areal-plus", and seem to indicate thought-processes that are characteristic of large segments of humanity.

Areal semantic features imply calquing or "loan translation", a process which can occur between related as well as non-related languages. In the past geographical contiguity was usually necessary for such calquing to occur, and it was a gradual process. Nowadays geographic contiguity is no longer a factor, and loan-translation can be instantaneous and global, so that the distinction between "areal" and "universal" is breaking down (see §V below).

II. Cross-linguistic similarities and differences in the semantics of compounds and collocations

2.1 Different constituents but same overall meaning

Sometimes there is no areal or even familial unanimity in the morphemic composition of collocations that designate the same object:

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15 Cf. the vulgar English slang expression suck face.
16 Calque is a loanword (< French) and loanword is a calque (< German Lehnwort).
· UVULA

This is an organ the functions of which are totally obscure, leaving the way open for great diversity in compound formation possibilities. The English word is from Latin ûvula "little grape"; TB languages typically form compounds with other bodyparts, but these range all over the anatomy, e.g.:

- Burmese hiya-khañ "tongue-knoll";
- Tangkhul Naga kharok-anathin "throat-liver";
- Written Tibetan ice-chuñ "little tongue";
- Lushai dañ-man "palate clitoris";
- Lahu ha-cûni "tongue clitoris".

Japanese, apparently via the phenomenon that Benedict (1979) dubbed "genital flipflop", has the expression nodo-chinko "throat-penis".

· ZOO

European languages tend to romanticize the displaying of captive animals, with expressions meaning ANIMAL + GARDEN: Eng. zoo < zoological garden, French jardïn des animaux, German Tiergarten, Dutch dierentuin, etc. The Lahu view the matter differently, expressing this with their compounds tônûtôsâ?-thô or fâ?-thô-ŋâ?-thô "ANIMAL + JAIL".

· BELLOWS

Chinese and Japanese describe this object by totally different compounds, Chinese by the more matter-of-fact fêngxiāng 風 箱 (WIND + BOX), while Japanese has the more fanciful jâbara 蛇 腹 (SNAKE + BELLY).

· PINE + APPLE ---> PINE-CONE

The original meaning of Eng. pineapple, attested since the late 14th century, was what is now called 'pine-cone', i.e. the fruit of the pine tree. French pomme de pin 'pine-cone' retains this original meaning. When the tropical fruit we now call pineapple reached Europe in the 17th century, its resemblance to a pine-cone caused the name to be transferred from the fruit of the pine to the fruit of the genus Ananassa. Other languages (e.g. French, German) took the path of adopting the botanical name (ananas) for the exotic fruit.

· PLEASURE AT ANOTHER’S PAIN

This complex concept has been lexicalized to a compound in German Schadenfreude (lit. DAMAGE + JOY), such an apt coinage that it has been borrowed by many English speakers. Chinese expresses the same idea by a four-syllable literary expression: xìng-zāi-lè-huò 幸災樂禍 "rejoice-disaster-enjoy-calamity".

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19 This latter formation also apparently occurs in Carrier, an Amerindian language of British Columbia (p.c. William Poser, April 2002).
21 While we are on this subject, the word pineapple is used in U.S. slang for hand grenade (usually called grenade for short). The word grenade itself is from the French word for 'pomegranate'.
22 See below §III.
2.11 Comparative PROVERBS

The last example leads us to the question of how folk wisdom is encoded into set expressions or proverbs. Sometimes these proverbs correspond exactly, in which case one can assume that contact has led to calquing. Thus English *Don’t look a gift horse in the mouth* is so similar to French *Un cheval donné on ne regarde pas à la dent* and German *Einem geschenkten Gaul sieht man nicht ins Maul* that calquing is the only reasonable explanation. On the other hand, it is hard to determine whether the similarity between English *Time flies like an arrow* and Japanese *Tsukihi no tatsu no wa ya no gotoku* ("The passage of the days and months is like an arrow") is due to calquing or is simply based on universal human experience.

More often perhaps the same proverbial message is conveyed by somewhat different images, as in the rough equivalents to be found for English *A burnt child dreads the fire* or *Once bitten, twice shy*:

- **French**: *Chat échaudé craint l’eau froide*. A scalded cat is afraid of cold water.
- **Russian**: *Obžegšisj na moloke, budešj dutj i na vodu*. Having been burnt on milk, you'll even blow on water.
- **Swahili**: *Aliyeumwa na nyoka, huogopa gamba lake*. One who has been bitten by a snake is afraid of snake skin.\(^{23}\)
- **Chinese**: *yī zhāo bēi shé yāo, shí nián pà jīngshēng*. One morning bitten by a snake, for ten years fear a well-rope.
- **Lahu**: *pì chè? jo qo, pí-ma là kà? kš?.* It you've once been stung by a bee, you're afraid even when a fly comes.

Some proverbial expressions are so original that even rough equivalents are difficult to find in other languages. The vivid Chinese saying *tā yǐnggài tuō kùzi fàng pì* ("He has to take off his pants to fart"), applied to someone who puts himself to unnecessary effort, has no close English analogue.

2.2 Same constituents but different overall meaning

Conversely, sometimes morphemically identical collocations may mean totally different things in different languages:

- **MIND + DIE**

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\(^{23}\) Another Swahili proverb (of Indian origin) in this vein is more similar to the Russian version: *Aliyeungua maziwa, hupuliza mtindi* "One who has burnt his tongue when drinking hot milk, blows air on sour milk." Data courtesy of A.Y.Lodhi.
We have seen (above 1.32) how this combination of morphemes means 'be settled/serene' in many Asian languages. In Mandarin Chinese, however, this same combination 殉死心 (sǐxīn 'die' + xīn 'heart') means rather 'give up on something or someone; drop an idea; have no further illusions'; when yǎn 'eye' is added, the trimorphemic 殉死眼 ("die in heart and eye") acquires the meaning 'be stubborn, obstinate as a mule'.

None of these expressions have the unfavorable Western associations of "brain-death".

• DAY + EYE
Old English dægesēge 'day's eye' > Mod. Eng. daisy. With the opposite order of constituents, EYE + DAY, the same combination means SUN in Indonesian/Malay matahari and Thai towan ('eye' + wan 'day').

• NIGHT + CRAWL
In English, a night-crawler is a kind of worm used for fishbait. The superficially similar Japanese word ゆばい ( yo 'night' + hau 'crawl') occurs in the expression ゆばいにゆく 夜 近いにゆく 'visit ladies at night for amorous purposes'. (A somewhat similar image of dragging oneself around for non-virtuous purposes is conveyed by English pub-crawler 'someone who visits one bar after another'.)

• HAND + PAPER
A famous example of the same ideographic compound with vastly different meanings in Japanese and Chinese is 手紙 (HAND + PAPER), read tegami in Japanese, with the meaning 'letter, epistle', but pronounced shōuzhi in Chinese, with the meaning 'toilet paper'.

• GRAB/GRASP + TESTICLE
In Japanese, the idiom 捨てものにキズマショウ (literally "grasp a person's balls") means 'curry favor with someone; try to ingratiniate oneself with someone'. The English expression have somebody by the balls is quite different, meaning 'have someone at a decisive disadvantage'.

• TAKE + TWO
English dilemma "situation that requires a choice between unattractive alternatives; problem for which there is no good solution" derives from Greek δί 'twice' + λέμμα 'proposition; something taken' < lambanein 'take'. Similar morphemically, though vastly different semantically, is American English double-take, a show-business term meaning 'a delayed reaction to an unusual remark or circumstance, often used as a comic device'.

• STAR + DATE
Chinese xīngqì 星期, literally "star-date", is the ordinary Mandarin word for 'week'. Quite independently, the creators of the classic TV science fiction program Star Trek coined the English compound star-date to refer to the time-keeping system of the far future.

24This word is cognate to the forms for 'die' in the TB languages cited above.
25The familiar Japanese word for 'testicle' means literally "golden ball" (kin 'gold', tama 'ball, sphere'); see below 2.3.
2.21 Incongruities in the literal translation of collocations

Sometimes collocations with similar morphemic structure also mean more or less the same thing in two languages, but differ in their stylistic level, so that literal translation is highly incongruous.26

'HANG + HIPS ---> SIT DOWN

Japanese: koshi wo kakeru 'sit down' (literally "hang one's hips") is an honorific expression much more polite than the simple verb suwaru. Yet it would be quite rude or highly jocular in English to invite someone to "hang his/her hips" ("Hang your hips right down on that chair, honey!") or to poser ses fesses in French.

'NOT + STOP ---> INTENSIFIER

A more recherche example of Japanese/English stylistic incongruity may be illustrated from the first sentence of Lady Murasaki's Tale of Genji (ca. A.D. 1000):

...itodo yamu goto naki kiwa ni wa aran ga ... 'although her rank was not so very distinguished', lit. "although she did not have an endless(ly high) rank"

An awful English literal translation might be "it wasn't that she had a rank that wouldn't quit", rendering the Heian Japanese intensifier yamu goto naki (lit. "there is no stopping") by the slangy American superlative that won't/wouldn't quit, as in She has a body that won't quit.

2.3 Allocomps and alternative paths of semantic association

A consideration of words for 'testicle' illustrates many of the associational categories discussed so far, ranging from universal to language-family specific to idiosyncratic. See Figure 7a.

![Figure 7a. Testicular associations (general)]

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26 As a cynical Frenchman (perhaps Sacha Guitry) once put it: "Les traductions sont comme les femmes -- lorsqu'elles sont belles, elles ne sont pas fidèles; lorsqu'elles sont fidèles, elles ne sont pas belles."
Most of the associations under ROUND OBJECT are "natural", and not localizable in any linguistic area. Less widespread are metaphorical associations with other paired organs, e.g. the kidneys, or pairs in general (e.g. twins).

The connection with heels is attested in TB, although it is quite indirect: Mikir ti: is glossed as 'egg, testicle; heel' (Walker 1925), via the compound EGG + FOOT ---> HEEL. The concept EGG itself in many Kuki-Chin languages has been identified as a compound of BIRD + WATER (Benedict 1939), e.g. Lushai ke-ar-tui 'heel' ("foot-egg": ke 'foot', ar 'bird', tui 'water'), so that we may diagram this complex of associations as in Figure 7b:

![Diagram of associations](image)

*Figure 7b. Testicular associations (Tibeto-Burman)*

English orchid derives from Greek **orchis** 'testicle; orchid', apparently so called because of the shape of the roots of most species. This association seems confined to IE, perhaps only to Greek. But see also Eng. dogstones (**Testiculus canis**), a name for various British species of orchids (**OED**).

English avocado ultimately derives from Nahuatl ahuacatl, which meant both 'fruit of the avocado tree' and 'testicle', but with the pronunciation contaminated by Spanish speakers by analogy with Sp. *avocado* 'lawyer'.

The association with EARTHWORM has so far only been unearthed in TB. The PTB root **zril** means 'worm' in most TB languages, including WT sril ≈ srin-bu, WB ti.

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27 Cf. dialectal Latin nefrones ≠ nebrundines ≠ nefundines 'kidneys; testes', as well as Chinese 腎 (Mand. shên), glossed 'testicles; kidneys' in Karlgren 1923:130. See JAM 1978:221-2, 281.

28 Cf. Greek didumoi 'twins; testicles'.

29 More recent data have shown that the Chin roots for 'water' differ in tone and/or vowel from the element in the compounds for 'egg', though it is not yet clear whether separate roots are involved or merely allofams of the same etymon.

30 Unless otherwise specified, references to the **Oxford English Dictionary** are to the 1973 printing of the 2-vol. Compact Edition.
Thado til); but in Lushai, Lai, and several other Chin languages til means 'testicle'. The original meaning seems definitely to have been WORM (Thado also belongs in the Chin group, but retains the meaning 'worm'), and one can only speculate on the exact path of semantic development in this case.

The striking homophony between Latin testis 'testicle' and testis 'witness' has nonplussed dictionary-makers. Some propose deriving the latter term from *tri-sto-'standing as a third (party)'. The OED, however, says "etym. uncertain". Buck (1949:257) guesses that the morphemic identity is probably in imitation of Gk. parastátai 'testicles', a word which was "wrongly associated with the legal sense of parastátēs 'supporter, defender', and so with 'witness'."

I personally feel that there is a clear semantic connection between the two concepts because of certain ancient Near Eastern oath-taking practices. In the Old Testament here are numerous references to swearing an oath to a man by placing a hand under his loins (Heb. švūa taxat matnāv 31 By swearing on his interlocutor's most precious possessions the oath-taker signified his willingness to be exposed to the utmost wrath of the other man should the oath be broken.

The question arises as to whether we need a special term to refer collectively to all the points in semantic space that are associated with the same concept in one language or another, e.g. do we ever need to refer to the relationship holding among BALL, ORCHID, WITNESS, and EARTHWORM? In the case of actual alternative compound formations where one constituent is the same but the other is different, is it useful to speak of allocomp? Just because BRAIN is sometimes expressed as HEAD + MARROW, but also as HEAD + SNOT, should we recognize a semantic connection between MARROW and SNOT? See Figure 8.

![Figure 8. Ways of conceiving brain](image)

III. Southeast Asian lexico-semantic areal features

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31See Genesis 24:2, Genesis 47:29, Ezekiel 17:18, etc. Whatever the etymological truth may be, classically trained French schoolboys often make the association explicit, referring to their testicles as mes témoins (Buck, ibid.).
On the simplest level, SE Asian areal semantic features include the presence of words referring to aspects of the physical environment of Southeast Asia, e.g. regional flora and fauna terms. It is not surprising that all Amazonian languages have a word for tapir, but no ST or African language does; or that the whole world has borrowed kangaroo from an Australian aboriginal language. Historical linguists have taken advantage of such facts when attempting to establish the Urheimat of a language family. Within East and SE Asia, names of animal species that were domesticated at any early date (e.g. DOG, HORSE, CHICKEN), as well as a number of feared, spectacular, or ubiquitous species (e.g. BIRD OF PREY, TIGER, ELEPHANT, CROCODILE, RABBIT) have diffused widely through the area.

Technological terms constitute another important category of areally diffused vocabulary, e.g. a root for CROSSBOW of the shape \*s-na that is found in Chinese 矛, Karen, Hmong-Mien, Tai, and Mon-Khmer.

Important clues to the semantic preoccupations of a linguistic area are the parts of the vocabulary where fine lexical distinctions are made. While the Eskimos might not really have as many words for snow as we used to think, at least it is safe to say that they must make more subtle conceptual distinctions in that area than SE Asians do. SE Asian languages are rich in verbs of manipulation (e.g. CARRY; CUT; PLUCK) reflecting the physical lifestyle of the region. While English also has a huge number of verbs of cutting, many of them are highly technical or not in common use (e.g. excise, amputate, julienne), in SE Asia verbs of cutting are simple in phonological shape (mono- or sesqui-syllabic) and used by everybody. In general, the Mon-Khmer languages do not make much use of compounding, making up for this by a high degree of lexical specificity.

Morphology plays a key role in the lexicalization of complex concepts, even in the monosyllabic Sinospheric languages (Chinese, Tibeto-Burman, Tai-Kadai, Hmong-Mien, Vietnamese), which typically have hundreds of four-syllable elaborate expressions, some literary but many in common use. These often involve

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32 Many of the items on the Meso-American list (Fig. 5) are in this category, e.g. #'s 9, 11, 20, 21, 22, 29, 39, 43.
33 The 200-word "CALMSEA" list (Culturally Appropriate Lexicostatistical Model for Southeast Asia) offered in JAM 1978:283-96 was an attempt to rectify some of the more glaring defects of the standard Swadesh list by eliminating items like SNOW and substituting appropriate areal concepts like MONKEY, BANANA, BAMBOO.
34 Caution must be exercised even here, however, since the referent of a flora/fauna term may change when speakers migrate to another area. The phytonym HEMLOCK known to Socrates (Fr. ciguë) was later applied to a totally unrelated New World evergreen (A.G. Haudricourt's example). See also Friedrich 1970.
35 There are even a few zoonyms which apparently reflect Indo-European contact with E. Asia (HONEY/MEAD; DOG; HORSE).
36 In several cases it can be demonstrated that Mon-Khmer is the source of animal-name loans into Tibeto-Burman. See Shorto 1973, JAM 1973.
37 The best study of technological and cultural Wanderwörter in SEA remains Benedict 1975.
38 The same is undoubtedly true of Scandinavians. See Hoeg 1993.
39 Diffloth (p.c.) reports an Aslian language with a monosyllabic verb that means 'to stack up flat round objects (e.g. pancakes or dried cowflaps)'.

repeated syllables (either the 1st and 3rd, or the 2nd and 4th), with the other two syllables being synonyms, antonyms, or otherwise correlative in meaning.\(^{40}\)

Of particular interest are compounds which have been calqued throughout SEA, but which have so far not been attested elsewhere\(^{41}\), e.g.:

- **PIG** + CRAZY/ILLNESS ---> **EPILEPSY** (Khmer, Mon, Thai, Indonesian/Malay, Burmese)
- **FLY** + SHIT ---> **FRECKLE/MOLE** (Khmer, Mon, Thai, Indonesian)
- **EYE** + **X** ---> **ANKLEBONE** :
  - **EYE** + **FOOT** (Indonesian, Burmese, Lahu)
  - **EYE** + **COW** (Khmer); **EYE** + **ELEPHANT** (Mon); **EYE** + **FISH** (Vietnamese)
- **TOOTH** + **INSECT** ---> **DENTAL CARIES** (Khmer, Vietnamese, White Hmong, Thai, Jingpho, Burmese, Chinese)
- **STAR** + **SHIT** ---> **METEOR** (Hmong, Lahu)

The metaphorical extension of the opposition MOTHER / CHILD to AUGMENTATIVE / DIMINUTIVE, is clearly to be considered a SE Asian areal semantic feature, though it is certainly to be found elsewhere.\(^{42}\) While MOTHER/FEMALE + HAND/FINGER ---> THUMB is found in other linguistic areas, so far MOTHER ---> LOCK vs. CHILD ---> KEY has not been observed outside of SE Asia. Cf. the following data:

**Indonesian**
- *ibu* 'mother' / *anak* 'child'
- *ibu kota* 'capital city', *ibu roti* 'yeast' (*kota* 'city', *roti* 'bread'); *ibu djari* ~ *ibu tangan* 'thumb', *ibu kaki* 'big toe' (*djari* 'finger', *tangan* 'hand', *kaki* 'foot'); *ibu panah* 'bow' / *anak panah* 'arrow'; *ibu kuntji* 'skeleton key; lock' / *anak kuntji* 'key'

**Cham**
- *inô* tanjin 'thumb', *inô* takai 'big toe' ( *inô* 'mother', *tanjin* 'hand' takai 'foot')

**White Hmong**
- *niam* 'mother; woman' à *niag* 'augmentative' (-m and -g are tone-marks)

**Mien (Chiangrai)**
- *puad-do'q-ñe* 'thumb', *zauj-do'q-ñe* 'big toe' (*puad* 'hand', *zauj* 'foot', *ñe* 'mother')

**Vietnamese**
- *cái* 'mother' / *con* 'child'
- *ngón tay cái* 'thumb', *ngón chân cái* 'big toe' (*ngón* 'digit', *tay* 'hand', *chân* 'foot')

**Thai**
- *mè* 'mother' / *lùuk* 'child\(^{43}\)
- *húa-mèe-myy* 'thumb', *húa-mèe-tiin* 'big toe' (*húa* 'head', *myy* 'hand', *tiin* 'foot')

**Hlai**

\(^{40}\)See, e.g. JAM 1986. Sometimes a morpheme which has become obsolete in other contexts is preserved in an elaborate expression, where its meaning can be deduced from that of its "couplet-partner".

\(^{41}\)See Purtle 1971, JAM 1978:70ff.

\(^{42}\)See JAM 1991b.

\(^{43}\)There are interesting similarities and differences between Vietnamese and Thai in the usage of these morphemes in particular compounds. Sometimes they correspond exactly (e.g. 'top (spinning toy)' Viet. *con quay* / Thai *lùuk-khàaø* (*lùuk* is also used in compounds referring to small round objects), but sometimes they do not (e.g. 'jack (lifting tool)' Viet. *con dòi* / Thai *mèe-reø* ("mother of strength").
<table>
<thead>
<tr>
<th>Language</th>
<th>Morpheme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>pài²-zǐn² (Baoding dial.), mei³-zǐn² (Zhongsha dial.)</td>
<td>'thumb' (pài³ / mei³ 'mother', zǐn² 'finger')</td>
</tr>
<tr>
<td>Chinese</td>
<td>(dà)-mù-zhī</td>
<td>'thumb' 大 拇 指 (dà 'big', mǔ 'mother', zhī 'finger'); in this compound the morpheme 'mother', usually written 母, is graphically elaborated by the hand-radical</td>
</tr>
<tr>
<td>Karen</td>
<td>kən3-mə-du, (Kayaw) cỳ-məh-du</td>
<td>'thumb' (kən3 'finger', cỳ 'hand', mə/məh 'mother', du 'big')</td>
</tr>
<tr>
<td>Lahu</td>
<td>ɡ̄aʔ-ма-pā</td>
<td>'mother hen'; ɯ̄-ма-pā 'magnet' (&quot;iron-mother&quot;); lìʔ-ма-pā 'alphabet' (&quot;writing-mother&quot;)</td>
</tr>
<tr>
<td>Jingpho</td>
<td>tāʔ-ɲən, yùn-nù</td>
<td>'thumb' (tāʔ 'hand', yùn 'finger', nù 'mother'); ɭən-ɲən, ɭən yùn-nù 'big toe' (ɭən 'foot')</td>
</tr>
<tr>
<td>Lushai</td>
<td>pui</td>
<td>'mother; augmentative', as in ar-pui 'mother hen', kho-pui 'chief village', kong-pui 'main road'; kut-zung-pui 'thumb', ke-zung-pui 'big toe' (kut 'hand', ke 'foot', zung 'finger')</td>
</tr>
<tr>
<td>Japanese</td>
<td>oyayubi 親 指 (PARENT + FINGER) 'thumb' / koyubi 子 指 CHILD + FINGER) 'little finger'; boshi 母指 or 拇 指 'thumb' (MOTHER + FINGER)</td>
<td></td>
</tr>
<tr>
<td>Nepali</td>
<td>buRi aŭlāa (OLD LADY + FINGER)</td>
<td></td>
</tr>
<tr>
<td>Tzeltal</td>
<td>smeʔ 'its mother' + ak'ab 'your hand' ---&gt; smeʔak'ab 'your thumb'</td>
<td></td>
</tr>
<tr>
<td>Arabic</td>
<td>umm 'mother' ---&gt; umm-al-nuʃum 'Milky Way' (&quot;mother of stars&quot;); umm-al-qurā 'Mecca' ('mother of cities'); umm-qarn 'rhinoceros' (&quot;mother of horn&quot;)</td>
<td></td>
</tr>
</tbody>
</table>

On the level of morphosyntax, there have been strikingly parallel developments of root-verbs to abstract auxiliaries that reflect massive grammaticizational calquing.\textsuperscript{46} e.g.:

<table>
<thead>
<tr>
<th>Language</th>
<th>Morpheme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>zài 在</td>
<td>dé; dēi 得</td>
</tr>
<tr>
<td>Thai</td>
<td>jūu</td>
<td>dāj</td>
</tr>
<tr>
<td>Hmong (Miao)</td>
<td>nyob</td>
<td>tāu</td>
</tr>
<tr>
<td>Mien (Yao Samsao)</td>
<td>yiam</td>
<td>tūʔ</td>
</tr>
<tr>
<td>Vietnamese</td>
<td>ō</td>
<td>đờc</td>
</tr>
<tr>
<td>Khmer</td>
<td>---</td>
<td>baan</td>
</tr>
<tr>
<td>Burmese</td>
<td>ne</td>
<td>ra</td>
</tr>
<tr>
<td>Lahu</td>
<td>chê</td>
<td>ţa</td>
</tr>
</tbody>
</table>

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\textsuperscript{44}Two Chinese morphemes for 'child', 兒 and 子 appear as noun-suffixes in Mandarin, sometimes with diminutive force. The latter morpheme is used neologically in the names of subatomic particles.

\textsuperscript{45}Cf. Hmong niam-ntawv 'alphabet' (niam 'mother', ntawv 'writing').

\textsuperscript{46}See JAM 1991a:414-440. See Viberg 2000 and To appear, for comparative studies of the grammaticalization of GO and GET in English and Swedish.
Certain collocations exemplify concepts characteristic of a broad regional worldview, what one might call the SE Asian sociocultural world of ideas. The Jingpho expression *myit ?owām ~ myit ?ogām* 'to be deterred by feelings of respect, embarrassment, fear of offending; be generally restrained in one's interpersonal behaviour by the knowledge that self-assertiveness is not socially approved' (Maran 1979) is paralleled in many other Asian languages (e.g. Thai *krehn-caj*, Burmese *fāna*, Japanese *enryō suru*), reflecting a mind-set more typical of the region than the more aggressive interpersonal ideal in Western competitive societies.

Greeting behavior falls into the sociocultural category as well. Greetings like "Where are you going?" and "Have you eaten yet?" are common throughout the region, but formulas like "Good morning" or "God be with you" are rare.

Some collocations involve metaphors reflecting the material rather than the social dimensions of life in SEA - images that spring naturally to the minds of people living closer to nature than we do:

· Jingpho *myit mākūn ~ myit dākūn* 'be resolute; make a resolution to do something' < *kūn* 'prepare to spring or charge, as a wild beast; crouch, as a tiger ready to spring'
· Jingpho *myit dāgūk* 'be boorish; have a klutz-like mentality' (Maran's gloss!) < *dāgūk* 'curve-horned' < PTB *gūk ~ *kūk* 'crooked, bent, curved'; the metaphor seems to refer to the sluggish behavior of SEA'n bovines, rather than to the inertness of hunks of wood (Yiddish *klots*, pl. *kletser*).

The verbalization of psychological phenomena also has characteristic features in Southeast Asia:

· Sentence-final particles with the exclusive function of expressing emotional attitude (particularly characteristic of omnisyllabic tone languages, where intonation alone seems inadequate to the task).
· Large repertoires of "expressives" that typically function as vivid adverbials encoding visual or auditory aspects of experience. These are especially highly developed in Mon-Khmer (see e.g. Diffloth 1976), as well as in Korean and Japanese (*giongo* and *gitaigo*).
· "Psycho-collocations", i.e. expressions referring to mental processes, emotional states, or qualities of character which contain a "psycho-noun" that explicitly mentions the locus of the activity or state (*heart, liver, gall, spirit, etc.*)

Finally one may perhaps speak of "negative areal semantic features", i.e. associations that are well exemplified elsewhere, but never seem to turn up in SE

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47 English has something similar, at least for qualities of character, which can be expressed by adjectives plus a suffixed form of a psycho-noun (e.g. *good-hearted, bad-tempered, ill-humored, narrow-minded*). But mental operations are not expressed this way, and emotions only rarely so (e.g. *heart-sick*). See JAM 1986.
Asian languages. These are of course potentially unlimited in number. A couple of random examples:

· The Indo-European association FINGER <----> GRASP (cf. German fangen) has not been attested in any language family of SE Asia.
· The conceptual opposition between HEART and REASON (cf. Pascal's aphorism, Le coeur a ses raisons, que la raison ne connaît point) seems quite foreign to East and SE Asia.

These negative facts are important when one is evaluating an etymology that involves a semantic leap that has never been attested anywhere in the language family or linguistic area in question (see below §VI).

IV. Vicissitudes of cultural prestige and the directionality of semantic influence

At the heart of diffusional phenomena are the dynamics of relative prestige among the languages in cultural and/or geographical contact. The following are brief characterizations of some of these relationships, in E/SE Asia and elsewhere:

4.1 Sanskrit/Pali and E/SE Asian languages

Even semantically obscure terms connected with Buddhism were dutifully borrowed phonologically or calqued from Sanskrit into Tibetan and Chinese, and from the latter into Japanese:

· Skt. dhyāna > Chinese 禪 (Mand. chán) > Jse. zen 'Zen Buddhism'.
· Skt. Tathāgata (lit. "went thus"; an appellation of the Buddha and certain Buddhist saints) > Chinese Rúlái 如來 (> Japanese Nyorai), Tibetan de-bzīn gségs-pa ("acc. to the explanation now generally accepted: he that walks in the same ways (as his predecessors), a very frq. epithet of the Buddhas": Jäschke 1881:565-6). A website I visited explained it as "one/those who have gone to suchness...(having just) walked onto the scene of the indescribable essence of reality".

Similarly with grammatical terminology, inappropriately calqued into Tibetan from Sanskrit. Cf. Written Tibetan rnam-dbye (lit. "piece-section"), "Grammatical cases...of which the Tibetan grammarians, from an excessive regard of the Sanskrit language and in fond imitation of its peculiarities, have also adopted seven in number" (Jäschke 1881:314-5).

Some words have filtered all the way down from Sanskrit/Pali to humble minority languages like Shan, Lahu, or Phunoi, via the great regional literary languages Mon, Burmese, Khmer, and Thai (e.g. Sanskrit/Pali > Mon > Burmese > Shan > Lahu; or Sanskrit/Pali > Khmer > Thai > Phunoi):
Skt. **āchārya** 'teacher, sage' > WB **chōyā** > Lahu **śālā**
> Khmer **ʔaacaʔ(r)** > Thai **aacaan**

### 4.2 Classical European languages

#### 4.21 Greek > Latin

Latin is full of words calqued from Greek, e.g.:
- *hypothesis* > *supposition*; *
*metamorphose* > *transform*; *
*entomo-* > *insect* ('in' + 'cut'), because insect bodies are divided into segments;
*sympathy* > *compassion*;
*melancholy* > *atrabiliouis* ("black-bile-ish"); *
*metaphor* > *transfer*.

#### 4.22 Greek/Latin > German, Russian, Celtic

Similarly, the classical languages have furnished models for the calquing of abstract vocabulary in modern European languages:
- *WITH + FEEL:* sympathy / compassion > Gm. **Mitleid**, Russ. **sočuvstvie**
- *IN/OUT + PRESS:* **Eindruck** / impression : **Ausdruck** / expression
- *FROM + HANG:* depend > Gm. **abhängen**, Russ. **zavisetj** (see above 1.31)
- *Names of the grammatical cases in Russian, e.g. **vinitelnyj podež** 'accusative case' (cf. **vinovat** 'guilty', **izviniti** 'exculpate, excuse')
- *Irish **magairle** 'testicle' ≈ **magairlin** 'orchid'; calque < Greek?* (see above 2.3)

### 4.3 Chinese and other East Asian languages

Prehistoric Cisyangtzeana (China south of the Yangtze) was a "mother-soup" (Ballard 1984); a "corridor of nationalities" (Sun Hongkai 1990, speaking of the Gansu/Tibet/Sichuan/Yunnan border area), where Han Chinese were not a majority until the Han Dynasty. Loanwords and calques must have gone in all directions (see Benedict 1975.) Later the overwhelming cultural prestige of Chinese ensured that the flow of linguistic influence went from Chinese to the other languages of the area, especially Vietnamese, Korean, and Japanese.

In the case of Japanese, this directionality changed decisively in the 19th century. Chinese had been exporting its morphemes (characters) to Japan since around the 7th c. A.D.; but in the 19th century Meiji Japan was influenced by Western culture and technology well before Qing Dynasty China, and combined these morphemes into new combinations, many of which were subsequently adopted into Chinese. This oscillation of mutual influence may be diagrammed as **Chinese > Japanese > Chinese**.

### 4.4 French and English

Ever since the Norman Conquest (A.D. 1066), French has had an enormous lexical influence on English, but beginning in the mid-20th century the tide has been turning, and by now the reversal of influence has reached truly terrifying
proportions. Desperate attempts are being made to popularize new "pure French" coinages in technological vocabulary like computer jargon, e.g. logiciel 'software'; ordinateur 'computer'; courrier électronique > courriel 'e-mail'; pourriel 'junkmail' (< pourrir 'to rot'); furecteur 'browser'; escargotique 'snailmail'; bavardoir (< bavarder 'to gossip'), or clavardoir < clavier 'keyboard') 'chatroom'. Some of these defensive coinages are considered ridiculous by the French themselves, e.g. la vacancelle (instead of le weekend). Some recent loans from English refer to unpleasant aspects of hurried modern life to which the French seem to prefer giving an Anglo-Saxon twist: le stress, le crash (of a plane). Others have been adopted because of their pop culture glamour, e.g. a poster advertising golf lessons to be found in Paris Métro stations (fall 2001) inviting people to swinguer comme Tiger Woods. Newspapers routinely use calques from American English to express modern geopolitical concepts, e.g. une réponse ciblée < Eng. targeted response; cibler (< la cible 'target') did not use to be a verb in French.

Many former faux amis ("false friends", i.e. English words originally borrowed from French but having slightly different meanings, are now converging under English influence:

- le trafic used to mean only 'illegal commerce': (as in le trafic des drogues) - now it is replacing la circulation in the sense of 'vehicular traffic';

- formel used to mean only 'strict; categorical', as in une interdiction formelle 'strict prohibition'; now it has come to mean 'formal' in the sense of 'ceremonious';

- le papier can now be used in the sense of a scholarly communication (le papier que j’ai présenté à la dernière sino-tibétaine), a usage formerly frowned upon.

But perhaps the situation is not as hopeless as it seems, since English is still borrowing the occasional lexical item from French (e.g. disco; microfiche; tampon; crampon ), and even calques a collocation once in a while, e.g. this (having) been said < ceci dit.

We may diagram this historical dynamic as French > English > French.

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48 The most frenetic resistance to this trend has been in Francophone Canada, where French speakers fear being drowned in a sea of English. Resistance has proved futile, however, and calquing from English to Québécois has been proceeding apace. See, e.g. Heller 1979.

49 This of course is still a calque from English. A couple of years ago I had independently suggested escargourier. The culturally important snail makes its reappearance in the French word for the symbol "@" used in e-mail addresses (le petit escargot), for which no universal term seems yet to have evolved. It is called strudel in Israel, again a tribute to a beloved food, but in Japanese it is called simply atto-maaku ("at-mark"), a phonetic loan. By the way, computer terminology has diverged quite a bit between Mainland and Taiwan Mandarin, e.g. the word for computer itself: Taiwan diannǎo 電 腦 ("electric brain"), Mainland jìsùānjī 计算机 ("calculating machine").

50 Either because the sense shifted in French itself while the older meaning was retained in English, or because of later semantic developments within English itself.

51 The directionality of some older calques is far from clear, e.g. spitting image (as in He's the spitting image of Pierre / C'est du Pierre tout craché.)
4.5 Spanish and English

Latin American Spanish has been calquing American English vocabulary for almost 200 years (e.g. *perro caliente* < *hot dog*), and there are areas of the U.S. where a virtual Spanish/English creole is developing, e.g. the "Tex-Mex" tongue with which President Bush is so familiar. The interweaving of the two languages will only become more intimate as the "Hispanic" population of the U.S. increases.

4.6 German and English

German has traditionally preferred calquing over borrowing when coining technical vocabulary (e.g. *Fernsprecher* 'telephone', *Fernseher* 'television', *Sauerstoff* 'oxygen', *Wasserstoff* 'hydrogen'), but has recently shown much greater receptivity toward loans from English, both in technical and everyday vocabulary.

4.7 Icelandic

Languages differ greatly in their receptivity to foreign influence; i.e. they have widely varying "acquisition tolerance quotients", with English and Japanese ranking near the top, and a language like Icelandic near the bottom. Geographically isolated from the rest of Europe, and with a small homogeneous population and an unbroken literary tradition of over 1000 years, Icelandic has resisted both phonetic borrowings and calques, and has successfully been purged of loans from the previous occupying power, Denmark. The whole country debates the suitability of new additions to the vocabulary. Among recent distinctive coinages are:

- **skjar** 'TV screen' (originally 'sheep's placenta', once used by farmers for windowpanes)
- **tolva** 'computer' < *tolur* 'number' + *volva* 'an ancient prophetess'
- **simi** 'telephone' < an old word for 'thread'
- **char** 'jet' < *kjota* 'to zoom'
- **myndband** 'video' ("picture band")
- **eythni** 'AIDS' ("total destruction") or *alnæmi* ("total vulnerability") - a debate is currently raging among about 15 other possibilities.

For other Scandinavians, a trip to Iceland is like a voyage 1000 years into the past.

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52 According to Roland Bielmeier, this word was propagated by the Nazis, though it never really caught on as a substitute for *Telefon*.
53 This concept was developed at length in JAM 1978, although it is there labelled "replacement tolerant quotient" or RTQ.
54 A. Lodhi notes the Swahili terms *simu* 'telephone', *barua ya simu* 'telegram' < Persian *sim* 'metal wire, thread' (cognate to the Icelandic word)?
V. Trans-areal semantic influence in recent times: are we headed for semantic globalization?

Technological innovations have led to both trans-areal and intra-areal calquing in E/SE Asia since the 19th century, with the direction of trans-areal influence being from European to Asian languages:

- **IRON + ROAD ---> RAILROAD**
  French *chemin de fer* > Viet. *đường sắt* Japanese *tetsudo* 鐵道 (＞Chinese, e.g. Mand *tiēdào*) is probably either from English or Dutch (cf. also Germ. *Eisenbahn*, Swed. *järnvägn*, Russ. *żeleznaja doroga*).

- **FIRE + CAR ---> TRAIN**
  Mandarin *huǒchē* 火車; Burmese *mî-yathâ*; Lahu *à-mí-là*; Indonesian *kereta api*; Thai *rótfaj*; Vietnamese *xe lô xa*. These latter compounds may actually be indigenous Asian creations, since the compound "fire-car" does not seem to exist in European languages.

5.1 **English and Chinese**

The enormous size of the Chinese lexicon, along with the sporting possibilities provided by its logographic writing system, has made possible a wide variety of creative meldings of calques, phonetic borrowings, and puns in the adaptation of English vocabulary to the strict monosyllabic structure of Chinese:55

5.11 Complete phonetic borrowings with a stab at the semantics

<table>
<thead>
<tr>
<th>俱樂部</th>
<th>可口可樂</th>
<th>馬踢你</th>
<th>白脫曲奇</th>
</tr>
</thead>
<tbody>
<tr>
<td>jùlèbù ‘club’</td>
<td>kěkǒukělè 'coca-cola'</td>
<td>mǎtīnǐ 'Martini' (Y.R. Chao)</td>
<td>báituōqūqí ‘butter cookie’</td>
</tr>
<tr>
<td>complete-enjoy-place</td>
<td>can-taste-can-enjoy</td>
<td>horse-kick-you</td>
<td>white-removed-cookie</td>
</tr>
</tbody>
</table>

5.12 Compounds with one real Chinese constituent and one straight phonetic borrowing

- **APPLE PIE** 蘋果派 *píngguǒ pài* (*píngguǒ* ‘apple’; *pài* < Eng.)
- **BAR (for alcohol)** 酒吧 *jiǔbā* (*jiǔ* ‘liquor’; *bā* < Eng.)
- **MANGO** 芒果 *mángguǒ* (*máng* < Eng. or Thai?); *guǒ* ‘fruit’

5.13 Compounds with one calqued and one real Chinese constituent which clarifies the semantic category

- **BRIDGE 橋牌 qiáopái**

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55 For an entertaining account of the many outside influences acting on the creation of Taiwan Chinese vocabulary, see Hansell 1990.
The etymology of the card game "bridge" is actually quite obscure. *Random House* suggests it is "apparently an alternation of earlier biritch < ?". It is called "Etym. uncert." in *Shorter OED* Vol. I, p. 221 (1964), but an earlier (1933) edition of the unabridged *OED* (Vol. I, p. 1098) implies it is related to a verb referring to a card-cheating practice. But Chinese does not hesitate to identify it by folk-etymology with the usual word for *bridge*. After all, it makes equal lack of sense in both languages!

**·COCKTAIL** 雞 尾 酒 jī-wěi-jǐū;

Here the first constituent is already a calque of "cock + tail" (actually "fowl-tail"), but jǐū 'liquor' is added to make the semantic category clear. (By coincidence one of the slang Chinese words for 'penis' is jǐ-ba 雞巴, where the first element is identified with "fowl", reminding one of the slang sense of English *cock*.)

5.14 Collocations with both constituents calqued

**·MAKE LOVE** 作 愛 zuò ài. A recent coinage, characterized by Mary Erbaugh (p.c.) as "the ugliest loan translation I've ever heard in my life!"

5.15 Graphic puns

**·PING-PONG** 兵 兵

An incredibly clever coinage based on the phonologically and graphically similar word 兵 bīng 'soldier'.

5.16 Senseless borrowing

The following is an exact transcription of the writing on a T-shirt worn by a little boy in Taiwan (observed Dec. 1995), under a picture of two cuddly bears:

Bear Spirit Club
sunny day is SEED TIME for HORSEBEA
Tra ra ra sings jen
Found HORSEBEANS
and in the

Anything at all written in Roman letters looks glamorous and exciting to a six-year-old who doesn't understand a single syllable.

5.17 Chinese influence on English

In the opposite direction, we may note a few recent calques from Chinese into English: xǐnǎo 洗 腦 > *brainwash*; zhīhǔ 紙 虎 > *paper tiger*. A somewhat earlier calque is *Long time no see*, prob. < 好久沒見 hǎo jiǔ méi jiàn. A handful of phonological borrowings have been around for quite a while (*catsup/ketchup*, *tycoon*, *typhoon*, *kowtow*, *lichee*, *gungho*).

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56*OED* offers this quotation in support: "By slightly bending a card -- termed bridging -- he could force, as it were, his opponent in the game to 'cut' the cards wherever he wished (1879)."
It is a safe assumption that the influence of Chinese on English will greatly increase in the course of the next couple of centuries.

### 5.2 English and Japanese

The influence of Western languages, especially English, on Japanese has been growing since the mid-19th century. The earliest wave of influence was provided by the "returned students" who brought back modern technical concepts from their studies abroad, e.g. from foreign medical schools. Thus, the names of the bones of the middle ear:

<table>
<thead>
<tr>
<th>Latin/Technical English</th>
<th>Everyday English</th>
<th>Japanese</th>
</tr>
</thead>
<tbody>
<tr>
<td>malleus</td>
<td>hammer</td>
<td>tsuchi-kotsu (tsuchi 'hammer'; kotsu 'bone')</td>
</tr>
<tr>
<td>stapes</td>
<td>stirrup</td>
<td>abumi-hone (abumi 'stirrup'; hone 'bone')</td>
</tr>
<tr>
<td>incus</td>
<td>anvil</td>
<td>kinuta-hone (kinuta 'fulling block')</td>
</tr>
</tbody>
</table>

The first two of these are direct calques, but the Japanese equivalent of *anvil* is a new creation. Instead of using kanatoko 'anvil' (lit. "metal-bed") for the bone of the ear, Japanese uses kinuta 'fulling block' < kina 'silk' + uta- 'to pound'), a wooden block on which silk cloth was spread and pounded in order to straighten the fibers and increase their gloss. Perhaps this metaphor was preferred in order to avoid the jarring associations of metal banging in one's ears.

**DIABETES**

Similarly creative is the Japanese coinage for 'diabetes', tōnyōbyō 糖尿病 ("sugar-urine-disease"), now also used in Chinese (Mand. tángniào bìng), a compound that is much more transparent than the English word, which has an obscure Greek etymology: < Gk. diabainein < dia- 'across, apart' + bainein 'walk, stand' ≠ diabeinein 'stride or stand with legs asunder', hence diabētēs 'one that straddles; a compass, siphon'. The latter sense led to a referential shift to this disease that involves the discharge of excessive amounts of urine.

**FONTANELLE**

Another apparent calque on Western bodypart terminology is Jse. seemon / Mandarin quánmén 泉門 (lit. "fountain-gate") 'fontanel(le)' < Eng. < Fr. "little fountain".

Since Japanese has by now borrowed virtually the entire lexicon of English, it need not confine itself to calquing pre-existing English collocations, but can freely amalgamate English morphemes into new combinations, truncating many of them in the process, e.g.:

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57 Although such calques still occur in abundance, e.g. osoi sutaato 'a slow start (as in a baseball season)' < Jse. osoi 'slow' + Eng.

58 While most of these sound quite bizarre or even incomprehensible to a native English speaker, it must be admitted that even some compounds invented by native English speakers seem quite strange on first hearing, e.g. trophy wife and arm candy (roughly synonymous). A few Japanese inventions have in fact caught on in the English-speaking world, e.g. oiru shokku 'oil shock'; Walkman: salary-man. Japanese morphemes are subtly being introduced into model names of Japanese cars, e.g. Camry (< kammuri 'crown'), so called because of the success of previous Toyota models with crown-like names (Corona and Corolla).
So insouciant and out of control is this Japanification of English that even some English affixes are being calqued or borrowed as if they were items of root vocabulary:

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·-teki, a Chinese-derived suffix already used to form adjectival or adverbial derivatives of many hundreds of Sino-Japanese nouns, has now been taken over to translate the English adverbial -wise: taimu-teki ni 'time-wise'.

·-opia (< cornucopia ) is used to signify a plenitude of fun things (e.g. sportopia), much like -rama in American English.

·-ing has come to mean 'outdoor sports' in Japanese, since there is now a chain of sporting goods stores called ING, because they have everything you need for campING, hikING, boatING, swimmING, etc.59

English loans in Japanese are now repartitioning themselves in conformity with modern social currents. Mixed-race Japanese/Caucasians have usually been called haafu (< 'half'); but this is now felt not to be politically correct, and is being replaced by the more positive dabburu.60

Not only is Japanese in the forefront of semantic globalization; one might also say that it is playing a leading role in the globagelization of world semantics. The bagelwich has in fact made it to Japan. See Figure 9.
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59By the way, French and Japanese usually treat Eng. -ing quite differently. French seems to like it: le meeting, le building, le smoking [jacket], le parking [lot]. On the other hand, Japanese usually drops it: happy ending; biiru 'building' (vs. biiru 'beer').

60In Thai such mixed-race individuals are called lūuk-khrýn 'half-children', and used to be the objects of popular prejudice. Now, however, they are acquiring a certain chic, and figure prominently in popular culture. Japanese also uses dabburu in an imaginative pun: many trendy coffee or ice cream shops have two size categories marked with the roman letters S and W, standing for shingaru (single) and dabburu (< double-u ), respectively.
Introduction to Bagelwiches

- Speed-menu for busy mornings:
  Onto a lightly toasted bagel spread some yoghurt, then some raspberry jam.

- A child-pleasing menu:
  Onto a bagel generously anointed with peanut butter, add some crisply fried bacon, then grill it in the toaster-oven.

VI. Semantic latitude and areal semantics

It is an art to decide how much semantic divergence may be tolerated among reflexes of the same etymon. Roots may indeed undergo spectacular semantic changes through time, and the glottochronological dogma against accepting semantically shifted cognates when determining degrees of genetic relationship goes much too far. However, the bigger the semantic leap the better the phonological correspondence must be between the putative cognates. Otherwise the phonological and semantic arguments are like two drunks supporting each other. Crucially, it should not automatically be assumed that semantic associations attested in one linguistic area are universally valid:

- Among the supposed cognates offered by Sagart (1990) to demonstrate a genetic link between Chinese and Austronesian is Proto-Austronesian *pusuq 'heart; central leaf' and OC 髓 *swia (re-reconstructed *s-j-wa?) 'marrow', since marrow is

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61Loans from English are in boldface.
supposedly "the heart of a bone". Yet, aside from the dubious phonological correspondence, there is no evidence at all that marrow has ever been conceived in a "heart-like" way by East Asian peoples.62

• Similarly, after admitting that "...the abundance of comparisons of the type water/sap over the type of water/water seriously diminishes the credibility of any hypothesis of genetic relationship", Vovin (1993:1) attempts to prove the Altaic affiliations of Japanese by such phonosemantically wild comparisons as Proto-Japanese *momo 'peach'/Proto-Manchu-Tungus *ñang-ta 'nut' (perhaps because such an association exists in Northern Caucasian languages).

• Sometimes a semantically dubious etymology is presented as if the meaning association were obvious, even though it may never have been clearly attested in any language family. As support for his Austro-Japanese theory, Benedict (1990:193) compares Indonesian ikan 'fish' (< PAN *Sikan) to Japanese ika 'squid' (< PJse *yika), since "squid, like fish, have long been a staple food source for the Japanese".

However, once a semantic association has already been established on independent grounds within a linguistic area, similar associations found elsewhere may well have confirmatory force. I have hypothesized that two supposedly distinct but homophonous PTB roots *dəm 'full' and *dəm 'straight; flat' are really one and the same, offering as additional evidence the phonological similarity and intercontamination between two semantically similar Indo-European roots represented by Latin plánus 'flat' and plénus 'full' (JAM 1988b).63 Further support was sought in the intrinsic common core of meaning among STRAIGHT, FLAT, and FULL, which represent "perfection" in one, two, and three dimensions, respectively. See Figure 10.

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62 What MARROW is related to conceptually (both within and without the SE Asian linguistic area) is BRAIN. See JAM 1978:181-4, and §1 above.

63 It has been objected that these IE roots are really quite distinct, since they are reconstructed with two different laryngeals, but surely they are close enough to be considered co-allofams, or at least likely candidates for intercontamination. The degree of phonological alternation between PIE *plā- and *plē- seems no more extreme than that between other variants that are accepted members of the same IE word-family, e.g. *wrg- ≠ *wrt- ≠ *wërkg- 'work; turn; twist'.
In the same article, three graphically differentiated but homophonous Chinese characters 財 材 才, all reconstructed as OC *dz'og in Karlgren 1957:#943, and all pronounced 財 in modern Mandarin) were demonstrated to reflect the same underlying etymon, meaning 'resources; property; talent'. The key evidence came from Tibeto-Burman cognates with meanings ranging from 'cattle; elephant; valuable work animal' to 'mind, heart, disposition', but a final bit of confirmatory support came from the well-known Indo-European association between cattle and property in general (cf. Latin pecunia, German Vieh, English fee; Eng. cattle ≠ chattel). See Figure 11.
Fears of global semantic homogenization may be exaggerated, in view of the fact that the worldwide spread of English as a second language has been accompanied by an equally rapid divergence of the regional Englishes from each other, because of interference from the various "substratal" mother tongues. Franglais does not have much in common with Taglish or Japlish. Just because Malay English has generalized the word saadin (< Eng. sardine) to mean 'tinned food in general' (p.c. Teo Kok Seong) does not mean that a parallel semantic development will necessarily occur anywhere else in second-language English.

Nevertheless, as time goes on it will become increasingly difficult to separate the strands of genetic, areal and globalized semantic associations. What is needed is a massive international effort to map the Human Semome as it exists now, just as the temple of Abu Simbel was moved to higher ground before flooding the area to build the Aswan High Dam. Surely it is not beyond the power of computer technology to create a master database of semantic associations in the world's languages, with explanatory diagrams in two and eventually three dimensions. See Figure 12, which charts the associations uncovered in the course of preparing Fascicle I (The
Reproductive System) of Volume I (Bodypart Terminology) of the Sino-Tibetan Etymological Dictionary and Thesaurus.

Are human thought processes as reflected in language everywhere the same? The extremes of relativism and universalism are equally to be avoided, in favor of an empirical approach that appreciates in equal measure the nuances of how languages differ and resemble one another.

**Figure 12. Metastatic flowchart of the reproductive system**
References


Heller, Monica. 1979. "What do ice and opera glasses have in common?: struggling with car part terminology in québecois." U.C. Berkeley term paper. 29 pp. MS.


