THE SEMANTICOSYNTACTIC BRIDGE II[*]

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1.   Introduction

As semantic categories I now posit: human (h), institution (i), animal (z), plant (f), biotic part (b), biotic matter (v), concrete continuum (m), concrete individuum (r), abstract continuum (a), abstract individuum (e), temporal continuum (d), temporal individuum (t), spatial continuum (w), spatial individuum (l), situations (s), proposition (p), quantitative continuum (g) and quantitative individuum (n).

The semantic roles are defined and/or listed as follows:

A = [+ Aeffector[**] + Volitional]   C = [+ Aeffector – Volitional]

V = [+ Aeffector + Volitional + Dynamic] B= [+Aeffector - Volitional + Dynamic]

W = [+ Aeffector + Volitional – Dynamic]

Q = [+ Aeffector – Volitional – Dynamic]

F =	Followed	D	=	Direction	R =	Reference
S =	Source	G	=	Goal	M =	Mediate
H =	Possessum	J	=	Comitative	P =	Holonym
E =	Beneficiary	T	=	Perceived	O =	Recipient

Letting θ and Є be semantic role and semantic category respectively three semantically well-formed formulae are definable:

$$\theta \, \text{Є}$$

$$\theta_1 \, \text{Є}_1 \, \theta_2 \, \text{Є}_2$$

$$\theta_1 \, \text{Є}_1 \, \theta_2 \, \text{Є}_2 \, \theta_3 \, \text{Є}_3$$

I now turn to situation formalization.

2.   Situation Formalization Exemplified

(1)   <u>She</u> us happy.   Qh
          h

(2)   <u>He</u> turned traitor.   Vh
          h

(3)   <u>The Sahara</u> is hot.   Ql
                l

(4)   <u>Last night</u> was warm.   Qt
                t

(5)   <u>The show</u> was interesting.   Qe
              e

(6)   <u>It</u> is windy.   Qa
          a

(7)   <u>He</u> was at <u>school</u>.   Wh Rl
          h   l

(8)   <u>She</u> got into the <u>car</u>.   Vh Gl
          h   l

(9)   <u>He</u> is lying on <u>the floor</u>.   Wh Rl
          h   l

(10)   <u>The meeting</u> is at <u>eight</u>.   Qe Rt
                e   t

(11) He was working.   Vh
       h

(12) She is standing.   Wh
       h

(13) The curtains disappeared.   Br
            r

(14) The wind is blowing.   Ba
           a

(15) It is raining.   Ba
      a

(16) He threw the ball.   Ah Br
       h   r

(17) Lightning struck the house.   Ca Bl
           a   l

(18) He is holding a knife.   Ah Qr
       h   r

(19) The stone broke the window. Cr_1 Br_2
           r_1 r_2

(20) She has a car.   Wh Hr
       h   r

(21) We paid the bus driver.
       h_1 h_2
i.e. We paid (money) to the bus driver. Ah_1 Bn Oh_2
       h_1 n h_2

(22) The will benefits us all.   Qe Eh
           e   h

(23) They climbed the mountain.   Vh Ml
       h   l

(24) The bus seats thirty.   Qr Rn
           r   n

(25) They fought a clean fight.   Ah Be
        r   e

(26) I wrote a letter.   Ah Br
      h   r

(27) They had an argument.   Ah Be
        h   e

(28) He nodded his head.   Ah Bb
        h   b

(29) He declared her the winner. Ah_1 Vh_2

(30) The sun turned it yellow.   Cr Bf
        r   f

(31) The revolver made him afraid.   Cr Bh
          r   h

(32) I found it strange.   Bh T[Qe]
      h   r

(33) He placed it on the shelf.   Ah Br Gl
        h   r   l

(34) The storm drove the ship ashore.   Ce Br Gl
          e   r   l

(35) A car knocked it. Cr_1 Br_2
        r_1 r_2

(36) I prefer them on toast.   Wh T[Qr_1 Rr_2]
      h r_1 r_2

(37) I bought her a gift. Ah_1 Br Eh_2
      h_1 h_2 r

(38) She gave the door a kick.   Ah Ce Br
        h   r   e

(39)   She knitted me a sweater. Ah_1 Br Eh_2
         h₁   h₂   r

(40)   She was singing.   Vh
         h

(41)   The string broke.   Br
             r

(42)   John sharpened the knife.   Ah Br
         h   r

(43)   The dog is digging a hole.   Az Bl
            z   l

(44)   Harold ran a mile.   Vh Ml.
          h   l

(45)   Susan went to Denmark.   Vh Gl
          h   l

(46)   Yasuko is arriving from Kyoto.   Vh Sl
           h   l

(47)   Helen traveled via Samarkand.   Vh Ml
          h   l

(48)   She gave the book to Bill. Ah_1 Br Oh_2
         h₁   r   h₂

(49)   I got the cassette from David. Ah_1 Br Oh_2
         h₂   r   h₁

(50)   I contacted Jane via her sister. Ah_1 Bh_3 Mh_2
         h₁   h₃   h₂

(51)   The painting cost £5,000.   Qr Mn
             r   n

(52)   Miranda knew all the answers.   Qh He
            h   e

(53) <u>Harriet</u> owns <u>a cat</u>.   Wh Hz
         h   z

(54) <u>Celia</u> is cold/sad.   Qh
         h

(55) <u>The child</u> is sleeping.   Qh
          h

(56) <u>The town</u> is dirty,   Ql
          l

(57) <u>Fiona</u> is the <u>convener</u>. $h_1 = h_2$
         h_1 h_2

(58) <u>Joyce</u> ran.   Vh
         h

(59) <u>Mary</u> found <u>the puppy</u>.   Vh Tz
         h   z

(60) <u>It</u> rains is <u>Spain</u>.   Ba Rl
         a   l

(61) <u>He</u> put <u>the cat</u> on <u>the porch</u>.   Ah Bz Gl
         h   z   l

(62) <u>He</u> flew from <u>Iowa</u> to <u>Idaho</u>.   Vh Sl_1 Gl_2
         H l_1 l_2

(63) <u>Jo</u> cuts <u>hair</u> with <u>a razor</u>.   Ah Cr Bh
         h   b   r

(64) <u>Helen</u> heard <u>Robert</u> playing <u>the piano</u>.   W h_1 T[Ah_2 Br]
         h_1 h_2 r

(65) <u>The wind</u> damaged <u>the roof</u>.   Ca Br
          a   r

(66)   The tail of the dog wagged furiously.
i.e.   <u>The tail of the dog</u> wagged in <u>a furious way</u>.   Bb Mg
              b   g

3. Semantic –Role Patterns

Letting Φ =   F, D, R, E, T, O, H, J, P, S, M, G

            Ω =   V, B, W, Q

            K   =   A, C

            K′   =   A, C   where K ≠ K′ because of the

θ – Criterion, semantic-role patterns are derivable using [Ω π] , where π is the predicate, as a point of departure. Thus,

<1>   (1)   [Ω π]
<1)   (2)   [Ω π Φ]
<1)   (3)   [K π Ω]
<2>   (4)   [K π Ω Φ]
<3>   (5)   [K′ π Ω Φ]

4. Syntactic-Role Patterns

Letting T_s =   subject role tagma

            T_p =   predicate tagma

            T_f =   free object role tagma

            T_c =   constrained object role tagma

the derivation of syntactic-role patterns is neatly analogous to that of semantic-role patterns in the foregoing section.

<1>   (1)   [T_s T_p]

<1>   (2)   [T_s T_p T_f]

<1>   (3)   [T_s T_p T_c]

<2>   (4)   [T_s T_p T_c T_f]

<3>   (5)   [T_s T_p T_c T_c]

5.   Semanticosyntactic Isomorphism

If the derivations in Sec 3-4 are compared, then it emerges that semantics is isomorphic to syntax as exhibited below.

$$\text{<1>} \quad (1) \quad [\, \Omega \, \pi \,] \quad\quad \equiv \quad\quad [\, T_s \, T_p \,]$$

$$\text{<1>} \quad (2) \quad [\, \Omega \, \pi \, \Phi \,] \quad\quad \equiv \quad\quad [T_s \, T_p \ T_f]$$

$$\text{<1>} \quad (3) \quad [K \, \pi \, \Omega] \quad\quad \equiv \quad\quad [T_s \, T_p \, T_c \,]$$

$$\text{<2>} \quad (4) \quad [\, K \, \pi \, \Omega \, \Phi] \quad \equiv \quad\quad [T_s \, T_p \, T_c \, T_f]$$

$$\text{<3>} \quad (5) \quad [\, K' \, \pi \, \Omega \, \Phi] \quad \equiv \quad\quad [T_s \, T_p \, T_c \, T_c]$$

6.   Conclusions

In conclusion, it is clear that the derived Principle of Semanticosyntactic Isomorphism is precisely the Semanticosyntactic Bridge I set out to build.