Network properties

L	number of links in a network; network sum continuity = Σl
C	network sum connectivity = Σc
D	network sum depth = Σd
S	sum value of a network (= L + C + D)
R	number of routes
Y	number of types of route
D'	maximum depth value of network

Netgram properties

Λ	relative continuity = L/S
X	relative connectivity = C/S
Δ	relative depth = D/S
	$\Lambda + X + \Delta = 1$

Hetgram properties

Ψ	irregularity = Y/R
Φ	regularity = $1 - \Psi$
Θ	recursivity = D'/R
Ω	complexity = (Y − D')/R
	$\Phi + \Theta + \Omega = 1$

Properties for Bayswater network

Network properties (Table 5.1)				Netgram values (Figure 6.4)		Hetgram values (Figure 6.12)	
L	73	R	27	Λ	0.28	Φ	0.26
C	112	Y	20	X	0.42	Θ	0.15
D	79	D'	4	Δ	0.30	Ω	0.59
S	264				1.00		1.00

For the Bayswater network (Figure 5.13), there are 41 T-junctions ($J_3 = 41$) and 5 crossroads ($J_4 = 5$). Hence $P = p_3{}^{J3}$ $p_4{}^{J4} = (3^{41} \times 6^5) = 283,614,019,828,880,035,069,728$.

A6.3 The Netgram

Each plotted point on the netgram represents a whole *network* (route structure). For each position on the netgram, $\Lambda + X + \Delta = 1$. On the bottom axis, where $\Delta = 0$, $\Lambda = (1 - X)$. Each position on the netgram can be expressed in terms of three parameters (Λ, X, Δ) or simply two parameters (X, Δ). The notation (X, Δ) is convenient as it echoes the Cartesian pair of 'along' and 'up' (X, Y). A set of reference lines (shown in grey) may be used to conveniently locate positions on the netgram, using simple relationships between Λ, X and Δ. Point O $(\frac{1}{4}, \frac{1}{2})$ is the position of a single link network (L = 1, C = 0, D = 1). Point P is $(\frac{1}{3}, \frac{1}{3})$; point Q is $(\frac{1}{2}, \frac{1}{3})$. The grid of references lines could be equated with the 'rhumb lines' on a navigational chart (Wilford, 2000) or reseau (reference lines on a star map, etc.).