K. Dickson (Purdue University)

*Bloodsongs: Pulse-Taking, Synesthesia, and Epistemic Shifts*

1. Escapement mechanism 2. Hippokrates on sfugmov~, *Breaths* 8

** pevplhntai ga;r aiJ flevbe~ hjevro~, plhsqei`sai de; kai; prhsqei`sai to;n povnon poievousin th`/ kefalh`/: bivh/ ga;r to; ai|ma biazovmenon dia; stenw`n oJdw`n qermo;n ejo;n ouj duvnatai peraiou`sqai tacevw~: polla; ga;r ejmpodw;n aujtw`/ kwluvmata kai; ejmfravgmata: dio; dh; kai; oiJ sfugmoi; givnontai peri; tou;~ krotavfou~.

cf. *Epidemics* 2.5, 2.6, 4.2; *Fractures* 1; *Wounds* 25

3. Rufus of Ephesus, *Synopsis de pulsibus* 4 on Herophilean pulse rhythms

oJ me;n ga;r prw`to~ ejpi; tw`n ajrtigenw`n paivdwn euJriskovmeno~ sfugmo;~ rJuqmo;n lhvyetai to;n tou` bracusullavbou... oJ de; tw`n pro;~ au[xhsin o[ntwn ajnalogei` tw`/ te para; ejkeivnoi~ podi; trocaivw/... oJ de; tw`n ajkmazovntwn tai`~ hJlikivai~ ejn ajmfotevroi~ i[so~ uJpavrcei, e[n te th`/ diastolh`/ kai; th`/ sustolh`/, sugkrinovmeno~ tw`/ kaloumevnw/ spondeivw/... oJ de; tw`n parak-mazovntwn kai; scedo;n h[dh gerovntwn kai; aujto;~ ejk triw`n suvgkeitai crovnwn, th;n sustolh;n th`~ diastolh`~ diplh`n paralambavnwn kai; croniwtevran.

|  |  |  |
| --- | --- | --- |
| AGE | RHYTHM | METRE |
| childhood | uu | pyrrhic |
| adolescence | —u | trochee |
| adulthood | —— | spondee |
| senescence | u— | iamb |

4. Pulse Notations: J. Struthius (1555); F. Marquet (1769)

 

5. Herophilean Pulse Categories

|  |  |  |  |
| --- | --- | --- | --- |
| GENUS | EXCESSIVE | MODERATE | DEFICIENT |
|  lengthSIZE breadth depth | longbroadhigh | moderatemoderatemoderate | shortnarrowlow |

6. Categories of a Single Beat (diastole OR systole OR pause)

|  |  |  |  |
| --- | --- | --- | --- |
| GENUS | EXCESSIVE | MODERATE | DEFICIENT |
|  lengthSIZE breadth depth | longbroadhigh | moderatemoderatemoderate | shortnarrowlow |
| SPEED | fast | moderate | slow |
| STRENGTH | vigorous | moderate | weak |
| TEXTURE | hard | moderate | soft |
| FREQUENCY | frequent | moderate | tardy |
| BEATS | uneven | even | uneven |
| RHYTHM | irregular | regular | irregular |
| FULLNESS | full | moderate | empty |
| NUMBER | uncountable | countable | uncountable |
| TEMPERATURE | hot | moderate | cold |

7. Galen, De *pulsuum differentiis* 1.28 on "gazelling" (dorkadivzwn) pulse

kai; oJ dorkadivzwn de; klhqei;~ uJpo; ÔHrofivlou sfugmo;~ e[sti me;n ejk tw`n kata; mivan diastolh;n ajnwmavlwn, suvnqeto~ de; kai; aujtov~ ejstin, oujdevtero~ ejfaptovmeno~ tw`n prosiousw`n toi`~ prwvtoi~ pevnte gevnesin ajnwmaliw`n, ajll∆ o{tan e}n movrion oJtoiou`n diakovpthtai th;n kivnhsin hJ ajrthriva, thnikau`ta mavlista genovmeno~, oujc aJplw`~: ouj ga;r o{lon tou`to to; gevno~ dorkadivzwn ejsti; sfugmov~, ajll∆ o{tan hJ meta; th;n hJsucivan deutevra kivnhsi~ wjkutevra te kai; sfordrotevra th`~ protevra~ h\/.

8. Pulse-Takers

|  |  |  |
| --- | --- | --- |
| Hippokratic texts | ca. 450-330 BCE | pulse (sfugmov~) ~ tremor (trovmo~) |
| Praxagoras of Kos | ca. 320 BCE | “discovery of the pulse”  |
| Herophilus  | ca. 335-280 BCE | pulse prosody |
| Rufus of Ephesus | late 1st cent. CE | *Synopsis of the Pulse* |
| Galen of Pergamon | 131-210 | 16 books on the pulse |
| Jacopo Di Dondi  | 1290–1359 | escapement mechanism |
| Joseph Struthius | 1510-1568 | *Sphygmicae artis...libri V* (1555) |
| John Floyer | 1649-1734 | *The Physician’s Pulse-Watch* (1707) |
| Francois Marquet | 1682-1759 | *Nouvelle méthode…pour connaitre le pouls par les notes de la musique* (1769) |
| William Heberden | 1710-1801 | *Commentarii de morborum historia et curatione* (1769) |
| Karl Ritter von Basch | 1837-1905 | sphygmomanometer (1881) |
| James Mackenzie | 1853-1925 | *Study of the Pulse Arterial…* (1902) |
| Nikolai Korotkoff | 1874-1920 | Korotkoff Sounds (1905) |

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