

AN INDEX OF GREEK LIGATURES AND CONTRACTIONS

INTRODUCTION

THIS Index owes its origin to the deciphering of a folio printed in Greek in Paris in 1628. As other books came under my eye, I found that in addition to the ligatures which I had analysed there were still many others, and I was so beguiled by their manifold and often obscure forms that I went far afield in my researches. It was surprising, no less than disconcerting, that with the exception of Proctor, to whom reference will presently be made, no one in modern days had occupied himself with a phase of Greek typography which, owing to its crabbedness and elusive contractions, based no doubt upon the Tironian practices of the scribes, had estranged students from the study of later Greek literature.

Beginning with the Baskerville fount of 1763, I worked backwards, overtaking the Paris fount, till, with a Froben as a complication, I was entangled in an Aldine. This led me to Proctor's erudite monograph on *The Printing of Greek in the Fifteenth Century*, which was of great value, for by its means I was able to verify my own decipherings and at the same time to add to my list fresh examples from the texts and founts which he had analysed.

Apart from Proctor's work only three lists were accessible. The first was that of Aldus Manutius (1494-5), who gave clues to the more complicated sorts¹ in one of his founts, adding that he passed over many 'connexiones' as they could be identified very easily. The next list was that printed at the end of the Greek Grammar of Ramus (Hanover, 1605), in which the Aldine 'connexiones' were included and others as well, a thoughtful proceeding if the Grammar was to be of any use, for it was printed almost entirely in ligatures. There were over 300 examples in this list. The last was the *Grande Police* of Fournier le jeune, Paris, 1764, which gave 376 ligatures in a fount of 776 sorts.

Obviously these lists could print only such sorts as existed in their founts; the Fell types, for instance, had extremely few, a sign that the English printers had begun to discard the ligature in favour of the simple sort.

Owing to the melting down of founts containing ligatures, an Index of this kind cannot be printed from type; it has to be copied by hand and reproduced by process from the manuscript. When it is considered that in an old fount there were hundreds of sorts—sometimes over a thousand—it is conceivable that in the preparation of this Index of over 500 ligatures some rare examples may have been overlooked, and therefore any additions will be gratefully acknowledged. When a fresh fount was examined its contractions were

¹ A "sort" is the printer's term for a single character or piece in his fount.

compared with those already noted in order to secure accuracy. The deciphering was simple when a modern reprint was available, but the works which afforded the richest harvest were for the most part strange treatises on all manner of subjects, from Astronomy to Gastronomy, which had remained enshrined if not interred in their original garb. In these the open letters of a word threw light upon the ligature, and when these failed, examples and sentences had to be collated. Again, though the meaning of a ligature was clear, its shape was not accepted until a number of specimens in the same book had been examined in order to exclude the possibility of a batter or broken type.

This is not the place to discuss what was the unit in a combination sort. My sole purpose is to assist the eye of the student, and purists in typography will perhaps visit me with their censure for including as a ligature a combination which consists of a 'kern' and a ligature. A 'kern'—French, *créné* or *crénage*—is defined as 'that part of a letter which overhangs its body, as in a lower-case f,' (Jacobi, *Printing*, sixth edition, p. 63). But in Greek typography a 'sort' is said to be 'kerned' when part of the body or shoulder is cut away so as to allow the next 'sort' to be brought so close that there is no visible space between the two. Thus *sigma alpha* or *tau alpha* (there are many other instances) were frequently kerned so as to present an unbroken continuity, and as they appeared to run into one another they were accepted as ligatured. Hence it is possible that some of the examples were copied from two sorts so neatly kerned that they looked like one. My aim, however, was to reproduce appearances and shapes rather than to split hairs over typographical niceties. Accents and breathings are shown when they form part of the ligature, but in doubt the word itself, and failing it the context, will prove the surest guide.

It is rather late in the day to asperse the practices of the early designers of Greek founts or to quarrel with their type-setters. *Litera scripta manet*. What the 'litera' meant is the whole function of this Index. The compositor who read *οἶον* as we prefer it had no scruples about printing it as *όἶον* and *διον* in one and the same line. Compare xi. 20 and 21. In one fount *ἀραρίσκω* occurred with a different ligature for each *αρ*, as though the breathing demanded discrimination. The compositor merely picked up the sort that was nearest. There are dozens of instances of misplaced accents and breathings, of different sorts and different ligatures for the same letters in one line of print. The crux in xix. 18 might weigh against accuracy in transcription. But it is just these liberties which the fifteenth-century compositors took which disconcert the scholars of the twentieth. Examined in the light of scholarship the ligature is wide of the mark in the placing of a circumflex over a short vowel, but the contraction exists in print. What happened was this. The compositor had to get in the words *λαμβάνειτ' οὖν*, but in order to justify his line he left out the space and ran two words together. So he kerned *omikron* and *tau*, put the apostrophe and breathing over *omikron*, and the circumflex on top. A short vowel circumflexed is, like metal on metal or colour on colour in heraldry, *pour enquéirir*, and an Index of this kind, if it is to serve its purpose, must contain examples of inconsistencies and perversions, for it is these, far more than the stereotyped ligatures, that are difficult to interpret.

Ligatures are more easy to read when they are detached from the words in which they occur, and therefore when a syllable or word has a variety of ligatures, as iii. 1 to 8, the reading is given once only so as to avoid crowding and repetition. Detached specimens of a single sort, such as ii. 18, or xviii. 13, are written on the same line.

The sorts in brackets show the manner in which symbols and contractions are combined with sorts, as in xi. 23 and xxiii. 12. The sort viii. 2 is an example of an apostrophe and rough breathing kernered, though it looks like an error in transcription. It is the unexpected that complicates deciphering, especially in founts of small size, and it is safer not to pillory the interpretation of a ligature without patient inquiry, for, however wrong the compositor, the scrupulous transcriber cannot be held accountable for breaches of scholarly decorum. The pitfalls are many, but it is hoped that this *farrago literarum* will be of some use in allaying the apprehensions of those who have been deterred from investigating early books printed in Greek owing to the forbidding aspect of their typography.

I wish to acknowledge my indebtedness to Mr. V. Scholderer of the British Museum for his interest and advice, and for his calling my attention to some examples which I had overlooked.

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iv	ϝ	γον	v	δι	δι	vi	ειναι
	ϝ Ϟ	γε	δι	δι	ειναι	ειναι	
	γει	γει	δι	δι	ειναι	ειναι	
	γεο	γεο	δι	δι	ειναι	ειναι	
5	γυ	γυ	δι	δι	ειναι	ειναι	
	γυν	γυν	δι	δι	ειναι	ειναι	
	γω	γω	δι	δι	ειναι	ειναι	
	γω	γω	δι	δι	ειναι	ειναι	
	γω	γω	δι	δι	ειναι	ειναι	
10	δα	δα	δι	δι	ειναι	ειναι	
	δα	δα	δι	δι	ειναι	ειναι	
	δα	δα	δι	δι	ειναι	ειναι	
	δα	δα	δι	δι	ειναι	ειναι	
15	δε	δε	δι	δι	ειναι	ειναι	
	δε	δε	δι	δι	ειναι	ειναι	
	δε	δε	δι	δι	ειναι	ειναι	
	δε	δε	δι	δι	ειναι	ειναι	
20	δε	δε	δι	δι	ειναι	ειναι	
	δε	δε	δι	δι	ειναι	ειναι	
	δε	δε	δι	δι	ειναι	ειναι	
	δε	δε	δι	δι	ειναι	ειναι	
25	δε	δε	δι	δι	ειναι	ειναι	
	δε	δε	δι	δι	ειναι	ειναι	
	δε	δε	δι	δι	ειναι	ειναι	
	δε	δε	δι	δι	ειναι	ειναι	

	x		xi		xii	
	κ̄ω̄ς	κ̄ω̄ν	μ̄α	μετ̄α	ϑ̄	ος
	κ̄ω̄		μ̄ω	μην	θ̄	ου
			μ̄ι	μι	ϑ̄ ϑ̄	
			μ̄ω	μν	ϑ̄	οῡ
5	λ		μ̄ο	μο	ϑ̄ϑ̄ε	οῡδε
	λα	λα	μ̄υ	μυ	ϑ̄ϑ̄κ	οῡκ
	λο	λο	μ̄υ	μυι	ϑ̄ω	οῡν
	λλ	λλ	μ̄ω	μυν	ϑ̄ν	
	λόγων	λόγων	μ̄ω̄	μω	ϑ̄	[τ̄] ους [τους
10			μ̄ω̄ν	μ̄ων	ϑ̄	οῡ
	μ μ		ν ρ ς η		ϑ̄	οῡτος
	μα	μα			ϑ̄	οῡτοῡ
	μαι	μαι				
15	μαν	μαν			π ω ω	
	μαρ	μαρ			π̄ω	παν
	μας	μας			π̄αν	
	μάτων	μάτων			π̄αρ	παρ
20	μεθ	μεθ			π̄α	παρα
	μεν	μεν			π̄ει	πει
	μεν̄	μεν̄			π̄ει	πεί
	μενον	μενον			π̄ει	πεί
	μενος	μενος			π̄ει	πεί
25	μετ̄α	μετ̄α			π̄ει	πεί

	xiii		xiv		xv	
	πρ	περ	πρ	πρα	σρ	σει
	πρ		πρ	προ	ση	ση
	πρ		πρ	προς	ση	σημαίνει
	περ	περί	πρ	πρω	ση	σημείον
5	πρ		πρ	πρ	σρ	σην
	πρ		πρ	πρ	σρ	σθ
	πρ		πρ	πρ	σρ	σθα
	πρ	πευ	πρ	πρ	σρ	σθαι
	πρ	πρ			σρ	
10	πρ	πρ			σρ	
	πρ		ρ	ρα	σρ	
	πρ	πλ	ρ	ρι	σρ	
	πρ	πρ	ρ	ρο	σρ	σθε
	πρ πρ	πρ			σρ	σθη
15	πρ πρ				σρ	σθην
	πρ	πρ	ρ ρ ρ ρ ρ		σρ	σθι
	πρ	πρ	ρ ρ ρ ρ ρ	σα	σρ	σθλ
	πρ	πρ	ρ ρ ρ ρ ρ	σαι	σρ	σθο
	πρ	πρ	ρ ρ ρ ρ ρ	σαν	σρ	σθω
20	πρ	πρ	ρ ρ ρ ρ ρ	σαμ	σρ	σι
	πρ	πρ	ρ ρ ρ ρ ρ	σαρ	σρ	
	πρ	πρ	ρ ρ ρ ρ ρ	σαυ	σρ	σκ
	πρ	πρ	ρ ρ ρ ρ ρ	σαυτα	σρ	σκη
	πρ	πρ	ρ ρ ρ ρ ρ	σβ	σρ	σκο
25	πρ	πρ	ρ ρ ρ ρ ρ	σει σε	σρ	σμ

	xvi		xvii		xviii	
	σμ	σμι	σσω	σσω	σχ	σχι
	σο	σο	ς ζ	στ	σχ	σχι
	σς		ς		σχ	σχι
	σθ	σθυ	ς α	στα	σχ	σχιρ
5	σπ	σπ	ς α υ	σταυ	σχ	σχιυ
	σπα	σπα	ς α υ ε	σταυε	σχ	σχιυε
	σπαι	σπαι	ς α υ ε ι	σταυει	σ	σ
	σπαν	σπαν	ς α υ ε ι η	σταυειη	σ	σ
	σπε	σπε	ς α υ ε ι η θ	σταυειηθ	σ	σ
10	σπει	σπει	ς α υ ε ι η θ ς	σταυειηθς	σ	σ
	σπη	σπη	ς α υ ε ι η θ ς ζ	σταυειηθςζ	σ	σ
	σπι	σπι	ς α υ ε ι η θ ς ζ η	σταυειηθςζη	σ	σ
	σπλ	σπλ	ς α υ ε ι η θ ς ζ η ς	σταυειηθςζης	σ	σ
	σπο	σπο	ς α υ ε ι η θ ς ζ η ς ς	σταυειηθςζηςς	σ	σ
15	σπυ	σπυ	ς α υ ε ι η θ ς ζ η ς ς ς	σταυειηθςζηςςς	σ	σ
	σπω	σπω	ς α υ ε ι η θ ς ζ η ς ς ς ς	σταυειηθςζηςςςς	σ	σ
	σς	σς	ς α υ ε ι η θ ς ζ η ς ς ς ς ς	σταυειηθςζηςςςςς	σ	σ
	σσα	σσα	ς α υ ε ι η θ ς ζ η ς ς ς ς ς ς	σταυειηθςζηςςςςςς	σ	σ
	σσαι	σσαι	ς α υ ε ι η θ ς ζ η ς ς ς ς ς ς ς	σταυειηθςζηςςςςςςς	σ	σ
20	σσαν	σσαν	ς α υ ε ι η θ ς ζ η ς ς ς ς ς ς ς ς	σταυειηθςζηςςςςςςςς	σ	σ
	σσαις	σσαις	ς α υ ε ι η θ ς ζ η ς ς ς ς ς ς ς ς ς	σταυειηθςζηςςςςςςςςς	σ	σ
	σσει	σσει	ς α υ ε ι η θ ς ζ η ς ς ς ς ς ς ς ς ς ς	σταυειηθςζηςςςςςςςςςς	σ	σ
	σση	σση	ς α υ ε ι η θ ς ζ η ς ς ς ς ς ς ς ς ς ς ς	σταυειηθςζηςςςςςςςςςςς	σ	σ
	σσι	σσι	ς α υ ε ι η θ ς ζ η ς ς ς ς ς ς ς ς ς ς ς ς	σταυειηθςζηςςςςςςςςςςςς	σ	σ
25	σσο	σσο	ς α υ ε ι η θ ς ζ η ς ς ς ς ς ς ς ς ς ς ς ς ς	σταυειηθςζηςςςςςςςςςςςςς	σ	σ

	xix				xx			xxi	
	τ̄	τ̄ε	τε	τ'ε	τ̄	του	τ̄	των	
	τ̄η		τ̄ει		τ̄η	του	τ̄η		
	τ̄ρη	τ̄η	τ̄ερ		τ̄η		τ̄η	τως	
5	τ̄η		τ̄η		τ̄η				
	τ̄η		τ̄ην		τ̄η		υ	υ	
	τ̄η		τ̄ην		τ̄η	τους	υ	υ	
	τ̄η		τ̄ης		τ̄η		υ	υι	
					τ̄η		υ	υν	
10					τ̄η	τουτο	ω		
					τ̄η	τη	ω		
			τι		τ̄η		ω		
					τ̄η		ω	υπ	
			τλ		τ̄η	τρι	ω	υπερ	
15			το		τ̄η	τρο	ω	υπο	
					τ̄η		ω	υς	
			το		τ̄η	τυ	ω		
			τ' ο̄ [τ' ο̄ υν]		τ̄η	τω	ω	υσι	
			τοις		τ̄η				
20			τοις		τ̄η	τω			
			τον		τ̄η				
			τον		τ̄η				
			τορ		τ̄η	τω	φ φ	φ φ φ	
			τος		τ̄η		ω	φ	
25			τος		τ̄η	των			

	xxii		xxiii
	Χ ^α	Χα	† †
	Χ ^α ω	Χαω	†α †ε ψα ψε
	Χ ^{αι}	Χαι	†† ψει
	Χ ^α ρ	Χαρ	†η ψη
5	Χ ^α ρ	Χαρ	†αω ψαυ
	Χ ^{ει}	Χει	†αυ
	Χ ^{ει} Χ ^η	Χει	†ο †υ ψυ
	Χ ^η ω	Χηω	
	Χ ^{θα}	Χθα	ω ω̄
10	Χ ^{θα} ω	Χθαω	ω̄
	Χ ^θ ι	Χθι	ω̄
	Χ ^θ ρ	Χθρ	ω̄ [ε̄ω̄] ω̄ [ε̄ω̄]
	Χ ^θ ω	Χθω	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^θ υ	Χθυ	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^θ υς	Χθυς	ω̄ [ε̄ω̄] [ε̄ω̄]
15	Χ ^θ ω	Χθω	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
20	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]
25	Χ ^ο	Χο	ω̄ [ε̄ω̄] [ε̄ω̄]