

# NOMEN EX INVENTORE: LATIN NOMENCLATURAL STRATEGIES IN NICOLAUS STENO'S OBSERVATIONES ANATOMICAE (1662)

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**Abstract:** This article analyzes the Latin nomenclatural strategies employed in Nicolaus Steno's *Observationes anatomicae* (1662) as a terminological text at a pivotal juncture in the history of anatomical naming. Through close textual analysis of the original Latin edition (Wellcome Library copy, 1662), the study examines the nomenclatural strategies in the main treatise, the epistemological framework articulated in the preface, and the polemic context of the work's composition. The analysis reveals a central paradox: in the preface, Steno is the first to explicitly articulate the epistemology of personal discovery that renders eponymous naming logically necessary, yet in the main treatise he consistently avoids eponymous nomenclature, describing the parotid duct through functional and topographic periphrases without fixing a proper name. The term ductus Stenonianus is shown to be a post factum act of the scientific community, resulting from a resolved priority dispute with Gerard Blasius, verified through the original text of the 1662 edition. A further significant finding concerns the systematic use of glandula as a central classificatory category (89 occurrences), which makes *Observationes anatomicae* a prototype of a new physiology of secretion rather than a mere report on a single discovery. The article situates Steno's contribution within the broader trajectory from Bauhin's descriptive systematization (1605) to the institutional codification of the Basel Nomenclature (1895) and the elimination of all eponyms in the *Terminologia Anatomica* (1998), arguing that Steno is not the initiator of the eponymic turn in anatomical nomenclature but its first philosophical articulator.

**Keywords:** anatomical nomenclature; eponyms; *Observationes anatomicae*; Nicolaus Steno; history of medicine

**Field:** Humanities

## 1. INTRODUCTION

The history of anatomical nomenclature in the early modern period is characterized by the juxtaposition of two competing principles of naming: the descriptive and the eponymous. The descriptive principle names structures according to their form, location, or function; the eponymous principle uses the name of the discoverer, regardless of morphological characteristics. The transition from the first to the second principle is one of the defining shifts in the history of medical Latin terminology, and its institutional resolution was formulated as late as 1895 with the *Basel Nomina Anatomica* (BNA) and finalized in 1998 with the "*Terminologia Anatomica*" (Chiapas-Gasca et al., 2012; O'Rahilly, 1989). In this context, Gaspard Bauhin's "*Theatrum anatomicum*" (1605) represents the culmination of the descriptive principle—a systematized matrix in which each structure is assigned a Latin term based on its visible characteristics. A textual analysis of *Theatrum anatomicum* reveals an internal contradiction in Bauhin's model: while the main treatise relies on descriptive paraphrases, the binary nomenclature forms for the cranial bones appear only in the figure index, not in the main text (Mirchev, in press)—a symptom of a boundary that the descriptive principle cannot overcome on its own (Ghosh, 2016). Nicolaus Steno's *Observationes anatomicae* (1662) occupies a particular and paradoxical place in this history. Steno is not the founder of the eponymous tradition — it precedes him by at least a century, as the cases of Falloppio and Eustachius demonstrate (Sakai, 2007). His contribution is of a different order: in the preface of *Observationes anatomicae*, he is the first to explicitly articulate the epistemology of personal discovery that renders eponymous naming logically necessary. The present article examines this paradox through close textual analysis of the original Latin edition.

## 2. MATERIALS AND METHODS

This study is based primarily on the original edition of Nikolaus Stenonis's "*Observationes anatomicae*", published in 1662 in Leiden and available at <https://archive.org/details/b31934080>. A linguistic and comparative method was employed—the Latin text was analyzed in its original form, with particular attention paid to nomenclature patterns, grammatical constructions, and the distribution of key terms across the three parts of the work.

Through appropriate keyword searches, the frequency and context of key terms were tracked: glandula (89 occurrences), ductus / ductum / ductu (various grammatical forms), parotis / parotides (19

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occurrences), and *inveni / observo*. The analysis covers all three parts of the 1662 edition: the main treatise *De Glandulis Oris* (pp. 1–56), the polemic *Responsio ad Vindicias Hepatis Redivivi* (pp. 57–84), and *De Glandulis Oculorum* (pp. 85–108). Secondary literature on the history of anatomical nomenclature and Steno's biography provided the interpretive framework (Kardel & Maquet, 2013; Strkalj, 2013; van Gijn & Gijssels, 2011).

### 3. RESULTS

#### 3.1 The Preface as Epistemological Framework

The preface of *Observationes anatomicae* is not an ornament to the main treatise but its philosophical foundation. Steno articulates a principled position on the nature of anatomical knowledge, centered on the irreducible incompleteness of observation: “*partium autem, è quibus naturalia corpora componuntur junctâ multitudini subtilitas tanta est, ut vel maximè attentum fallat & eludat*” [“so great is the subtlety of the parts of which natural bodies are composed in their connected multiplicity that it escapes and deceives even the most attentive”] (Steno, 1662, sig. \*4r). From this epistemological premise follows the key methodological conclusion: “*nunquam circumspectè adeò omnia observant, quin iisdem artis peritior accedens alius alia inveniatur delenda, supplenda alia, alia mutanda*” [“they never observe all things so carefully that a more skilled other, approaching the same, does not find things to be deleted, added, or changed”] (Steno, 1662, sig. \*4r). Significantly, in the same preface Steno alludes directly to the Vesalian project — “*animalium fabricæ ideam omnibus numeris redderent absolutam*” [“to present the idea of the structure of living beings perfect in all its elements”] (Steno, 1662, sig. \*4r) — only to declare its principled incompleteness. Vesalius had achieved systematic completeness; Steno demonstrates that it is illusory. The key word in the argument is *alius* — “another”: not an abstract researcher, but a concrete, different observer whose personal gaze adds something irreplaceable. It is precisely this personalization of knowledge that constitutes the philosophical precondition of eponymous naming. The logical implication is clear: if anatomical knowledge is cumulative and personal, naming after the discoverer is not an arbitrary convention but an epistemological necessity.

#### 3.2 Nomenclatural Strategies in the Main Treatise

The central finding of the textual analysis concerns the nomenclature of the parotid duct itself. Steno employs *ductus* in various grammatical forms (*ductui*, *ductum*, *ductu*) throughout the text, but consistently uses it as a general lexeme “canal,” qualified by functional or topographic determiners. The parotid duct is described as *ductum salivarem externam* [“the outer salivary canal”] (Steno, 1662, p. 17), as *ductu singulari ab usu salivari dicto* [“a single canal named after its salivary function”] (Steno, 1662, p. 14), and as *ductus salivaris interioris* [“the inner salivary canal”] (Steno, 1662, p. 5). Neither the form *ductus parotideus* nor any eponymous nomination appears in the primary source. The term *Stensen's duct* belongs entirely to subsequent terminological reception.

A further significant finding concerns the term *glandula*, which appears 89 times across the corpus. Steno not only describes individual glands but defines the category systematically: “*Glandulae quippe omnes propriè dictae*” [“all glands, properly so called”] (Steno, 1662, p. 7), distinguishing types (*conglomeratae* and *conglobatae*) according to a functional principle borrowed from Sylvius. This conceptual reorganization of bodily fluids — each fluid a glandular secretion, each gland with its own canal — constitutes the theoretical core of the work and makes *Observationes anatomicae* a prototype of a new physiology of secretion rather than a mere report on a single discovery. The first-person verbs — *inveni* [“I found”], *observo* [“I observe”], *seco* [“I cut”], *examino* [“I examine”] — appear consistently in direct connection with specific dissection acts on specific animal specimens (Steno, 1662, pp. 6, 11, 15). These are not rhetorical devices but structural markers of the observational genre (*observatio*) to which the work belongs: the personal act of observation is the epistemological warrant for the discovery.

### 4. DISCUSSION

The polemic context of the work reinforces the nomenclatural findings. The priority dispute with Gerard Blasius over the parotid duct directly motivates the composition of *Observationes anatomicae*. In §.7 of the main treatise, Steno describes Blasius's methodological failure directly: “*viderémque eum ductui tam manifesto nec verum ortum, nec egressum verum assignare potuisse*” [“I saw that he was unable to assign either the true origin or the true exit of so manifest a canal”] (Steno, 1662, p. 6). This is simultaneously an anatomical description and a legal argument: where Blasius saw an unclear structure, Steno describes a precise topographic path. Anatomical precision functions as evidence of priority. The

eponym ductus Stenonianus emerges not from this text but from its reception: Johannes van Horne publicly demonstrated the canal and attributed it to Steno, while Blasius's competing claim was settled in Steno's favor by the scientific community (van Gijn & Gijssels, 2011).

The so-called NOMEN principle (Non-Original Malappropriate Eponymous Nomenclature) formulates the ironic observation that "almost no phenomenon is named after its true first discoverer" (McNulty et al., 2021). The Steno case illustrates this precisely: he formulates in the preface the epistemology that makes eponymous naming logically necessary, but does not practice it in the treatise. The community names the discoverer after the end of the dispute, not the discoverer himself. This mechanism — discovery, contestation, verification, post factum naming — is not unique to Steno: it characterizes the broader eponymous turn in seventeenth-century anatomy, exemplified by Wharton's submandibular duct (1656) and Glisson's hepatic capsule (1654).

A comparison with Steno's immediate contemporaries reveals that the mechanism is not an exception but a rule. Thomas Wharton described the submandibular duct in *Adenographia* (1656) — six years before *Observationes anatomicae* — and, like Steno, used a descriptive term: ductus salivalis. The eponym ductus Whartonianus established itself in clinical usage later, through the same post factum mechanism. Francis Glisson described the fibrous capsule of the liver in *Anatomia hepatis* (1654) without naming it after himself. The paradoxical result is that ductus Stenonianus and ductus Whartonianus coexist in the clinical lexicon without any indication of which belongs to the parotid gland and which to the submandibular (Kachlik et al., 2008) — a practical demonstration of the nomenclatural inefficiency of the eponym as an informational tool.

The cumulative weight of this tradition eventually generated the terminological chaos that required institutional resolution: by the nineteenth century, some 50,000 names circulated for approximately 5,000 anatomical structures (O'Rahilly, 1989), a situation that compelled the Anatomical Society to establish a Nomenclature Commission in 1889 and adopt the BNA in 1895 (Pretterklieber, 2024). The polemic section of *Observationes anatomicae*, the *Responsio ad Vindicias Hepatis Redivivi* (pp. 57–84), confirms that Steno employs the same precise terminology in the polemical as in the scientific text: "lacteis succi per lymphatica ad glandulas oris motum" ["the movement of chyle through the lymphatic vessels to the glands of the mouth"] (Steno, 1662, p. 58). The term is an argument, not an ornament. It is noteworthy that the *Responsio* is not connected to the priority dispute over the parotid duct but is a defense of Steno's Leiden mentor Johannes van Horne against the attacks of Anton Deusing on the function of the liver and lymphatic vessels — two distinct scientific disputes united in a single work. Scientific texts in seventeenth-century anatomy were simultaneously research reports and instruments for the defense of institutional positions.

## 5. CONCLUSION

The textual analysis of Nicolaus Steno's *Observationes anatomicae* (1662) yields three principal conclusions. First, the preface articulates for the first time in explicit philosophical terms the epistemology of personal discovery that renders eponymous naming logically necessary: if anatomical knowledge is cumulative and irreducibly personal, naming after the discoverer follows as a logical consequence rather than a mere convention. Second, the main treatise consistently avoids eponymous nomenclature: the parotid duct is described through functional and topographic periphrases without a fixed proper name. The eponym ductus Stenonianus is a post factum act of the scientific community, produced by a resolved priority dispute. Third, Steno's conceptual reorganization of bodily fluids around the category *glandula* makes *Observationes anatomicae* a prototype of a new physiology of secretion, whose terminological implications extend far beyond the parotid duct.

Within the broader series of studies on Latin anatomical terminology in early printed editions — covering Vesalius (1543), Falloppio (1561), and Bauhin (1605) — *Observationes anatomicae* closes the sequence in a distinctive way: not as a new systematic nomenclatural text, but as the text whose preface first articulates the philosophy that makes the subsequent nomenclatural history inevitable. Steno is not the initiator of the eponymic turn; he is its first philosophical articulator. The arc from his preface (1662) to the Basel Nomenclature (1895) and the *Terminologia Anatomica* (1998) spans three and a half centuries of institutional working-out of a problem that Steno named but did not resolve.

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