



MEDICINA NEI SECOLI

Journal of History of Medicine and Medical Humanities

34/3 (2022) 31-44

Received: 10.09.2022 Accepted: 24.10.2022 DOI: 10.13133/2531-7288/2688

Corresponding author: Marco Cilione marco.cilione@unimore.it

Children in Greco-Roman Society: Age, Development, Work and Nosological Relevance. A Historical-Medical Perspective

Marco Cilione

Dipartimento di Scienze Biomediche, Metaboliche e Neuroscienze, Università Di Modena e Reggio Emilia, Italy

Silvia Iorio

Dipartimento di Scienze e Biotecnologie Medico-Chirurgiche, Sapienza -Università Di Roma, Italy

Valentina Gazzaniga

Dipartimento di Scienze e Biotecnologie Medico-Chirurgiche, Sapienza - Università di Roma, Italy

Abstract

Children in Greco-Roman Society

The definition of childhood in historical studies is as recent a problem as the attention devoted by scholars to this age group. A reflection on the nomenclature used in Greek and Latin literary, epigraphic, legal and properly medical sources and the comparison with paleopathological studies allows us to interpret the historical perception of childhood in terms of incompleteness. In the Hippocratic and Galenic tradition this incompleteness unites children to fragile and marginalized categories, namely women and the elderly, but above all it does not recognize their specific diseases, delaying the birth of pediatrics for centuries.

Keywords: Children - Occupational Diseases - Incompletness - Ligurinus - Anthimianus - Fullonica

The history of children, to whom research seems to give more and more space recently, is the last to have won the interest of scholars. They are gradually trying to give voice to a significant phase of human existence, necessarily marked by silence before birth, and by the inability to articulate meaningful words immediately after¹. As a matter of fact, infancy extends its boundaries around the age of seven, if Quintilian², rhetorician and school teacher under the Flavian dynasty, overlaps *infans*³ and *puer*⁴. It seems as if the etymological origin of the word 'infant' (unable to speak) and the silence of historical sources, which rarely give explicit attention to children, are consistent with each other. In this difficult path of investigation, the history of ancient medicine offers a research perspective particularly functional to the topic. In fact, it is methodologically accustomed to collecting data which are distributed in the most varied and heterogeneous fields of knowledge. Therefore, historians of medicine are used to collaborate with all their "sister disciplines", traditional and new, in the reconstruction of nosological frameworks.

Specifically, the anthropological investigation on the skeletal remains of individuals of subadult age, found in the Roman necropolises of the imperial age, provides us with the extraordinary opportunity to subject to a multidisciplinary approach the study of the lifestyles of children and adolescents. Otherwise, their age and social condition would exclude any possibility of historical reconstruction. The first level of multidisciplinary comparison concerns the definition of non-/sub-adult age which is different from the point of view of the discipline that deal with it. Besides, we have to take into account all the significant fluctuations that each specific historical-cultural contexts implies. This is particularly evident from the study of the sources relating to the ancient Roman world. The criteria adopted are rather flexible and indicative⁵. Just to give an example, the Quintilian scan of the phases of non-/sub-adulthood places the child's aptitude for speech around the age of seven.

However, Quintilian does not seem to associate this age with a too rigid cognitive watershed; instead, he emphasizes the early gradualness and progressiveness of an intellectual development whose fruits will be capitalized upon once *adulescentia* is reached⁶. The articulation of the ages for hebdomades, moreover, does not have a simply magical-symbolic connotation, or at least not only⁷. The encephalo-myelogenetic theory of semen, which the sources attribute to the physician Alcmaeon of Croton (VI century BCE), in fact, associates cognitive maturation with sexual maturation and fixes on a biological basis the scanning of ages according to an hebdomadal scheme⁸. The criterion of seven is also actively applied in the legal field.

Roman law, however, tends to distinguish the phases of childhood in a more rigid way than Quintilian does, although without formalizing the distinction in norm⁹: the aptitude for speech is associated with cognitive maturation, but to the extent that it allows the individual a deliberative act consciously consequent to the exercise of *voluntas*. For the time span between 0 and 14 years, it is even possible to infer from the sources a further distinction between those who cannot speak (*qui fari non possunt*), those who can speak without understanding (*qui fari possunt sine intelligere*) and those who can speak (*qui fari possunt*) with an understanding adequate to involvement in a negotiation act¹⁰. The last ones are flanked but not replaced by a guardian at least until entry into puberty (14 years for male, 12 for female)¹¹: again sexual maturation and cognitive maturation overlap. It follows that the so-called *infantia maior* coincides with *pueritia*, which is defined, for purely practical and formal reasons, from the age of seven¹².

The recurrence of the number seven both to define the ages of man's life and to quantify its duration suggests a parameterization of Roman law which seems to be inspired by a very ancient belief. This associates the seven and its multiples to the relationship between sexual maturation and socio-political function of gender, which is intellectual in the case of the male and reproductive in the case of the female¹³. The biopolitical value of the scan into hebdomades also has nosological relevance. It plays a remarkable role in the interpretation of the symptoms and in the therapeutic approach¹⁴ to the disease within the CH, as the importance of the number seven in the identification of the critical days of a pathology testifies. Even before birth, the CH defines the stages of intrauterine life¹⁵ on an arythmological basis according to which the fetus of seven months survives and that of eight months has a higher risk of dying¹⁶.

The terminological inhomogeneity that the ancient historical, literary and medical sources highlight with respect to the identification of certain boundaries to determine childhood, has led to a significant reflection also in bioarchaeology. In this field of study, the prevailing nomenclature is either "sub-adult" or "non-adult": they are used to indicate the skeletal remains of an individual under the age of 19¹⁷. Whether one or the other is preferred, the problem remains the historical-social perception of childhood that continues to be defined in a relationship of subordination with respect to adulthood or in terms of its denial. Little difference, therefore, with respect to the Aristotelian perspective of the child as an adult in power: in a teleological vision of existence the adult constitutes the formal and final cause of childhood¹⁸. No doubt the convenience of the nomenclature facilitates classification, but partly obscures the specifics of this existential segment that should be defined in dynamic continuity with intrauterine life and adulthood. On balance, the metaphorical language of literature, which often expresses the idea of conception, growth and development through images drawn from the plant and animal world, seems to represent with less rigidity the phases of childhood. As Rosa Rita Marchese acutely points out, the physical and psychological portrait, probably of the young Ligurinus, which Horace traces in Odes 4.10, expresses with epigrammatic intensity the transition as gradual as inexorable, from youth to maturity¹⁹. The description has the advantage of simultaneously calling into question the two main paradigms of the passage from one age to another: the vegetable one²⁰, through the image that associates youth and *flos rosae puniceae* (v. 4),

where adulthood is characterized by a more prosaic and less healthy *color* $(v. 4)^{21}$; the animal one that associates the appearance of the beard²² with the appearance of feathers²³ in adult birds. The two paradigms are widely exploited by Aristotle: he seems to superimpose the continuity of the phases of human life on the biological continuity of natural species²⁴, according to a scheme that defines the hierarchy of living organisms starting from the gradualness of the functions that characterize them (vegetative, sensitive and rational)²⁵.

It is true, however, that the definition of childhood in close dependence on adulthood is reflected in the way in which this phase of life is dealt with by medical treatises at least until the mid-fifteenth century, when Bagellardo dal Fiume publishes in Padua his Libellus de aegritudinibus infantium ac remediis (1472). Until that moment, in fact, medicine deals with the theme of childhood in an asystematic way and in subordination to embryology, gynecology, dietetics and in general with respect to all other areas of care. An exception is the treatise De curis puerorum by Rhazes that circulates in the Latin West thanks to the translation by Gerard of Cremona (IX-X century)²⁶ and which, as Karl Sudhoff²⁷ already points out, represents one of Bagellardo's main references²⁸. The medical sources of antiquity and, due to the persistence of Hippocratism and Galenism, of the Middle Ages and part of the Modern Age²⁹, seem to recognize only incidentally the child's body as a place of specific diseases and particular care. Leslie Dean-Jones' detailed review of CH's writings also highlights the difficulty of correctly interpreting the use of terms such as $\pi \alpha \tilde{i} \zeta$, $\pi \alpha i \delta (\sigma \kappa \eta, \mu \epsilon i \rho \alpha \kappa i \sigma v)$ and $\pi\alpha\rho\theta$ ένος³⁰, especially in reference to specific clinical cases, and therefore to isolate a specific field of pediatrics: none of the above words unequivocally indicates childhood³¹. Where the context allows, the child's body is defined in relation to the primary qualities of the natural elements, specifically heat and humidity. In the growth path, in fact, what matters is the principle of proximity to the prenatal condition in which the nourishment is attributable to the constitutive excess of moisture in the female body (normally balanced by the menstrual flow, which is interrupted during pregnancy so that the blood is diverted to the embryo) and the development of the innate heat that allows the coction, that is to say the thickening of the $\gamma ov \eta^{32}$. The vegetal paradigm of the seed, planted in the earth and nourished by it, well defines conception³³ from the enunciation of the formula with which, in Attic law, the father entrusts the *nubenda* to the bridegroom hoping for "the plowing of legitimate children"³⁴.

The persistence and diffusion of the plant paradigm also in the nosological field is evidenced by a famous metric inscription³⁵. It is a funerary epitaph (Rome³⁶, II-III century AD) for the little Lucius Minicius Anthimianus destined for an early death (4 years, 5 months, 20 days) as a result of a series of pathologies to which his father, perhaps a physician, tries in vain to cope³⁷. The complexity of the clinical story of this $\pi\alpha$ $\tilde{\alpha}\omega\rho\sigma\varsigma$, which makes a precise retrospective diagnosis extremely difficult, seems to be a sort of *cursus morborum* that takes on the contours of a tragic pathography,

of a competitive effort aimed at removing the child from his inevitable destiny of death through sophisticated medical care. The term $v\eta\pi iov$ (v. 6), which legally places Lucius Minicius Anthimianus in the age segment of *infantia minor*, can be associated with the adjective εὐερνής (v. 15) which connotes the first phase of the child's short life in the sense of flowering, exploiting the semantic field proper to vegetation³⁸. Galen³⁹ also uses it by quoting a comment by Zeuxis of Taranto (empirical school, III century BC) to Hippocrates in which children are defined v $\eta\pi\mu\alpha$ until they reach puberty ($\eta\beta\eta$): in the passage the children $\sigma\alpha\rho\kappa$ o $\tilde{\tau}\alpha$ i [...] $\mu\tilde{\alpha}\lambda\lambda$ ov $\kappa\alpha$ i εὐερνέστερα γίνεται [...] ("they put on more meat [...] and they become much more prosperous [...].")⁴⁰. Perhaps the association between $v\eta\pi ioc$ (here almost a condensation of the stages of life) and εὐερνής in the text of the epigraph is less naïve than one might believe and comforts us in hypothesizing the medical profession, or at least a certain habit of reading medical texts, for the unfortunate father. More generally, the passage in question reiterates, adding to the authority of Hippocrates that of Herophilus, that $v\eta\pi u\alpha$ are all children up to puberty, not those whose age is between birth and 5-6 years, "as most are now saying"⁴¹, a sign that the scan of the age groups was not homogeneous even in the medical field. The discrimination is determined by the extent of spermatogenesis and menstrual flow that contribute to the balance of humors and temperature in the transition from childhood to adolescence (and therefore the distance from the actors of conception). In both Hippocrates and Galen, therefore, pediatric etiopathogenesis would seem to be marked by the common denominator of incomplete development⁴²: it determines a unbalance that unites children, women and the elderly in a condition of fragility and greater exposure to diseases, which is a constant in pathocenotic frameworks through centuries. The τελειότης as a prerequisite of health has probably discouraged the interest of ancient Greek and Roman medicine to define an autonomous nosological and therapeutic field for children⁴³ as they are simply characterized by an incomplete development of bone tissues, glands responsible for the absorption of excess humors⁴⁴, and the immune system, it could be added today, because of their high mortality rate compared to the spread of infectious diseases. It is no coincidence that in the passage of Galen to which reference has been made, the distinction between childhood and adolescence is introduced precisely in relation to a disease found more in children, namely epilepsy: it is attributable to a humoral excess of black bile or phlegm (cold and wet) that must be drained through the use of medical matter (diuretics and emetics) and that in any case is reduced with development because puberty is warmer and drier⁴⁵. In this form of humoral imbalance, childhood and old age are united, even if they represent the physiological extremes of existence. Childhood, in fact, due to excess moisture and heat, corresponds to spring; old age, on the other hand, as cold and dry, corresponds to winter. However, when the distribution of primary qualities is associated with the four humors, the phlegm, which is not cold and dry, but cold and wet, seems to prevail. Galen⁴⁶ tries to resolve this

apparent contradiction by identifying in old age both the dryness of the solid parts of the body, due to the exhaustion of the innate humor, and an excess of acrid substance similar to phlegm, due to the exhaustion of innate heat that hinders the perfection of the concoction processes. This cold moisture of old age overlaps with that of childhood affected by epilepsy: both, in fact, are due to phenomena of incompleteness that alter the humoral balance⁴⁷.

The case of the little Lucius Anthimianus offers a sort of nosological compendium that manifests in succession an inflammation of the testicles, a bone necrosis and an infection of the bowels generally traced back to the effects of three forms of tuberculosis: urogenital, osteomyelitic, peritoneal. However, a more cautious approach that takes into account the generic nature of the symptoms described and the little information on the environmental conditioning that could have facilitated the onset of the disease or diseases that have affected Lucius Anthimianus is absolutely acceptable⁴⁸. Tuberculosis is a hypothesis consistent with the pathocenotic framework coeval with the inscription, but in the uncertainty of retrodiagnosis the only certain fact with respect to the possibility of identifying the etiopathogenesis of the diseases mentioned in the epigraph in a pathogen (not necessarily tuberculosis) is the ease of children to contagion, especially in densely populated urban contexts. The case of Rome from the end of the Republican age to the III-IV century AD is emblematic in this sense. The demographic increase, to which significant migratory flows from the countryside and provinces contribute, the influx of slave labor, the increase in housing units and commercial and craft activities affect the quality of life also from a health point of view. The interdictal decrees and literary sources testify how "abusive" sewage discharges and some commercial activities such as fullonicae polluted the air, water and agricultural funds, exposing especially children to the contagion of infectious diseases. The air that surrounds the body and enters the body through the inhalation and intake of food and drink are among the factors to which Galen⁴⁹ attributes the quality of health. The osteological lesion to the left femur of a child aged between 2 and 4 years, whose remains were found in tomb 46 of area Q in the necropolis of Casal Bertone, fits perfectly into this context and seems to have some affinity with the case of Lucius Anthimianus. The skeletal remains reveal, in fact, the action of pathogenic microorganisms attributable to the polluting effects of the sewage of a *fullonica* near which the child and his family lived. Polluted water, air, food are alike to be at the origin of the infection, not to mention that the bacterial load may have been transmitted to the baby through breast milk⁵⁰. Lucius Anthimianus was also breastfed by his mother by paternal will (v. 14) and could therefore have been exposed to the pathogenic effects of environmental pollution both directly and by vertical contagion. Finally, in the semeiotics of the third disease, the reference to the swelling of the bowels is accompanied by the "fusion" of the other parts (v. 28), which the text expresses through the verb ἐκτήκω.

Swelling and abdominal consumption are among the symptoms identified by the CH for a specific pathology of *fullones*⁵¹, to which Ramazzini refers talking about the occupational diseases of those who use urine to stain and dve tissues⁵². It is probably a nosological framework attributable to an etiopathogenesis of an infectious nature⁵³ and surprises, also in this case, the precision of the epigraph in the use of the medical lexicon: the verb ἐκτήκω, in fact, seems to echo the Hippocratic use of verb ξυντήκω used precisely to express the abdominal decay of *fullones*. If, therefore, the impact of the environmental factor on the characterization of pathocenosis and on the interpretation of nosological frameworks so ambiguous and distant in time is evident, the role of socio-economic variables in the effects produced on the lifestyle and health of children assumes equal importance. The definition of the child as a non-adult/sub-adult is perfectly superimposable to his biological perception of incompleteness⁵⁴ and this seems to be the only parameter of social relevance of childhood in the Greco-Roman world. Free children or children of servile condition are in various ways involved in work activities compatibly with the functionality of the relationship between the task and the level of development of physical and intellectual abilities. It was not necessary to wait until puberty for this to happen "quia etiam impuberis aliquae operae esse possunt", says the Digest⁵⁵. The work of children is a constant of the imperial age and takes on more significant dimensions as, starting from the fifth century AD, the servile system goes into crisis⁵⁶.

However, how does work affect their health? There is still no systematic study on the occupational diseases of the ancients, and therefore even less on the occupational diseases of children whose relevance in the productive system of the imperial age is only recently beginning to be considered by scholars. Even for adult workers we have very few traces in the sources. Apart from the abovementioned case of *fullones*, Hippocrates explicitly associates a severe nosological framework with the activity in mines⁵⁷. Galen deals with the diseases of *fullones*⁵⁸ and Juvenal mentions the varicose veins of the charioteer forced to stand for a long time⁵⁹. As a matter of fact, the first text on occupational medicine is precisely the eighteenth-century one by Bernardino Ramazzini who once and a while, in accordance with erudition and long durations of Hippocratism and Galenism, refers to the Greek and Roman world. The iconographic tradition and the epigraphic and literary testimonies attest to the participation of minors in many professional activities; anthropological and molecular analysis on skeletal remains reveals the effects that these activities, often exhausting, produce on the body. In particular, the transport of loads, the iteration of certain movements, contact with potentially toxic and infectious substances produce lesions that on the body of the child worker are manifested with greater aggressiveness.

The findings of Herculaneum⁶⁰ and the most recent ones of Casal Bertone, Via Lucrezia Romana and Castel Malnome⁶¹ have highlighted the exposure of childhood skeletons to significant weight stresses. The historical-medical sources document a

certain awareness of bone fragility in the prepubertal phase that is framed in the incompleteness of tissue development. To this must be added the effects of deficiency diseases or in any case of a regimen often insufficient to support growth⁶² in conjunction with strenuous and exhausting work. In the case of *fullonicae*⁶³, then, repeated loads and movements are associated with direct exposure to aggressive and toxic substances that came into contact with the skin (many detergents, such as montmorillonite or bentonite were applied by hand) and that were inhaled in the fumigation processes used to whiten and soften the wool⁶⁴. Finally, urine, used as a detergent for its alkaline properties, exposed *fullones* not only to bad smell, but also to the effects of its bacterial load. In this industrious hell, it is not surprising that children⁶⁵ died early from fatigue and respiratory diseases. Seneca's observation on the beneficial effects that the movements of the *fullones*⁶⁶ would entail is worth as much as the invitation of the Athenaeus of Attalia⁶⁷ to the Roman matrons to keep fit by adopting the diet and practicing the domestic activities of their slaves⁶⁸, but above all it testifies to the distance between the traditional historical sources and the occupational diseases that united adults and children

Bibliography and notes

Albanese B, Le persone nel diritto privato romano. Palermo: Tip. S. Montaina; 1979.

Amundsen DW, Diers J, The Age of Menarche in Classical Greece and Rome. Hum Biol 1969;41:125-132.

Andò V, La verginità come follia: il "PERI PARTHENION" ippocratico. Quad stor n.s. 1990;25(75,3):715-737.

Boehm I, Le couleur du corps chez Galien. Coloration naturelle et couleurs modifies dans la polychromie du vivant. In: Collard F, Samama É, Le corps polychrome. Couleurs et santé. Antiquité, Moyen \hat{Age} , Époque modern. Paris: L'Harmattan; 2018. pp. 11-22.

Bos G, McVaugh M, (eds) Al-Razi, On the Treatment of small Children (*De curis puerorum*). The Latin and Hebrew Translation. Leiden-Boston: Brill; 2015. pp. 15-30.

Cadoux CJ, Ancient Smyrna. A history of the city from the earliest times to 324 A. D. Oxford; Blackwell; 1938.

Capasso L, Di Domenicantonio L, Work-related syndesmoses on the bones of children who died in Herculaneum. Lancet 1998;352:1634.

Battistini A, Caldarini C, Catalano P, Di Giannantonio S, Pantano W, Zavaroni F, The work done in Rome by children and adolescents: hypothesis based on the anthropological analysis of three suburban necropolises of the imperial age. Medicina nei secoli 2022;34(3):21-30.

Catalano P, Cilione M, De Angelis F, Gazzaniga V, Ancient Roman pathocenosis: an integrated medical journey.

Catenacci C, L'eros impossibile e ruoli omoerotici (Simonide fr. 21 West), QUCCn.s.2000;66(3):57-67.

Cilione M, Pythagorica Medica. *Scienza e sapienza nella tradizione preippocratica*. Roma-Bristol, CT: L'Erma di Bretschneider; 2022.

Cilione M, Gazzaniga V, La fabbrica dei figli: i Greci e la τεκνοποιία nelle fonti epigrafiche

e letterarie. In: Capocci M, Cilione M, Giorgianni F, I nomi del male e i segni dell'eredità. Pensare, nominare e curare la malattia "genetica" dai Greci a noi. Bologna: il Mulino; 2019. pp. 73-100.

Cilione M, Gazzaniga V, Born to go Hungry: Female Physiology, Ethics and Dietetics from Presocratics to Late Antiquity. Byzantinische Forsch 2021;33:245-262.

Dean-Jones LA, Women's bodies in classical Greek science. Oxford: University Press; 1994. Dean-Jones LA, The child patient of the Hippocratics: early pediatrics?. In: Grubbs JE, Parkin TG (eds), The Oxford handbook of childhood and education in the classical world. Oxford-New York: University Press; 2013.

Demaitre L, The idea of Childhood and Child Care in Medical Writings of the Middle Ages. J Psychohist 1977;4(4):461-490.

Distefano SS, Roman culture in a Greek context: Smyrna between the first and the fourth century AD. Some preliminary observations. In: Gavagnin K, Palermo R (eds), Imperial Connections. Interactions and Expansion from Assyria to the Roman Period. Vol 2. Proceedings of the 5th "Broadening Horizons" Conference (Udine 5-8 June 2017). Trieste: EUT; 2020. pp. 289-298.

Fedeli P, Ciccarelli I (eds), Q. Horatii Flacci Carmina. Liber IV. Firenze: Le Monnier; 2008.

Flohr M, The world of fullo. Work, Economy, and Society in Roman Italy. Oxford: University Press; 2013.

Gallavotti C, Metri e ritmi nelle iscrizioni greche. Roma: Accademia nazionale dei Lincei; 1979.

Giorgianni F (ed.), Ippocrate, La natura del bambino dal seme alla nascita. Palermo: Sellerio; 2012.

Giorgianni F, Come un tenero virgulto: termini e ideologie della crescita nel pensiero greco pre-aristotelico. In: Giorgianni F, Li Causi P, Maggio MC, Marchese RR (eds), Crescere/ Svilupparsi. Teorie e rappresentazioni fra mondo antico e scienze della vita contemporanee. Palermo: University Press; 2020. pp. 77-105.

Gourevitch D, I giovani pazienti di Galeno. Bari: Laterza; 2001.

Graumann LA, Horstmanshoff M, "This I Suffered in the Short Space of my Life". The Epitaph for Lucius Anthimianus (CIG 3272; Peek GV 1166). In: Petridou G, Thumiger C (eds), Homo Patiens-Approaches to the Patient in the Ancient World. Leiden-Boston: Brill; 2016. pp. 23-80.

Harcum CG, The Ages of Man: a Study suggested by Horace, Ars Poetica, Lines 153-178. The Classical Weekly 1914;7(15):114-118.

Jouanna J (ed), (notes de Grmek MD). Hippocrate, Épidémies V et VII. Paris: Les Belles Lettres; 2000.

Knothe HG, Zur 7-Jahresgrenze der 'infantia' im antike Römischen Recht. SDHI 1982;XLVIII:239-256.

Laes C, Child slaves at work in Roman antiquity. AncSoc 2008;38:235-283.

Laes C, Children and Occupations in Late Ancient Rome (300-700 CE). In: Laes C, Mustakallio K, Vuolanto V (eds), Children and family in Late Antiquity. Life, Death and Interaction. Leuven: Peeters; 2015. pp. 79-109.

Lamberti F, Su alcune distinzioni riguardo all'età dell'impubere nelle fonti giuridiche romane. In: Cagnazzi S et al. (eds), Scritti di storia per Mario Pani. Bari: Edipuglia; 2011. pp. 211-236.

Laspia P, Per una crescita felice. Immagini della natura nell'ontogenesi umana all'interno del *Corpus aristotelicum*. In: Giorgianni F, Li Causi P, Maggio MC, Marchese RR (eds), Crescere/ Svilupparsi. Teorie e rappresentazioni fra mondo antico e scienze della vita contemporanee.

Palermo: University Press; 2020. pp. 147-183.

Lewis ME, The Bioarchaeology of Children. Perspectives from Biological and Forensic Anthropology. Cambridge: University press; 2007.

Li Causi P, Diventare pienamente umani: la teoria dello sviluppo morale integrato nell'epistola 124 di Seneca. In: Giorgianni F, Li Causi P, Maggio MC, Marchese RR (eds). Crescere/Svilupparsi. Teorie e rappresentazioni fra mondo antico e scienze della vita contemporanee. Palermo: University Press; 2020. pp. 107-126.

Maggioni G, Paolo Bagellardo dal Fiume e il suo *Libellus de aegritudinibus et remediis infantium* (1472). Med. Secoli. 2009;21(3):1205-1224.

Marchese RR, Le conseguenze del crescere. Una rilettura di Orazio, *Carmina* 4.10. In: Giorgianni F, Li Causi P, Maggio MC, Marchese RR (eds), Crescere/Svilupparsi. Teorie e rappresentazioni fra mondo antico e scienze della vita contemporanee. Palermo: University Press; 2020. pp. 259-273.

Minozzi S, Catalano P, Calderini C, Fornaciari G, Palaeopathology in Roman Imperial Age. Palaeopathology 2012;79:268-283.

Monteix N, Les Lieux de métier. Boutiques et ateliers d'Herculanum. Rome: EFR; 2010.

Moretti L (ed.), Inscriptiones Graecae urbis Romae IV (1491-1705). Roma: Istituto italiano per la storia antica; 1990.

Mudry P, *Non pueri sicut viri*: Petit aperçu de pédiatrie romaine. In: Dasen V (ed.), Naissance et petite enfance dans l'Antiquité. Actes du colloque de Fribourg, 28 novembre-1^{er} décembre 2001, Orbis Biblicus et Orientalis 203. Fribourg: Academic Press; 2004. pp. 339-348.

Petermandl W, Kinderarbait im Italien der Prinzipatszeit. Ein Beitrag zur Sozialgeschichte des Kindes. Laverna 1997;8:113-136.

Petzl G, GVI 1166 — eine Krankengeschichte aus Smyrna?. Chiron 1981;11:303-308.

Porena P, Il lavoro infantile. In: Marcone A (ed.), Storia del lavoro in Italia. L'età romana. Liberi, semiliberi e schiavi in una società premoderna. Roma: Castelvecchi; 2016. pp. 663-794. Prosperi A, Dare l'anima. Storia di un infanticidio. Torino: Einaudi; 2005.

Rawson B, Children and Childhood in Roman Italy. New York; Oxford University Press; 2003.

Repici L, Uomini capovolti. Le piante nel pensiero dei Greci. Pisa: Edizioni della Normale; 2020.

Rinaldi M, Il dibattito pediatrico all'università di Padova tra la fine del Cinquecento e l'inizio del Seicento. In: Zucchello F, Perilongo G, Silvano G (eds), La pediatria a Padova. Una storia secolare. Roma-Bari: Laterza; 2022. pp. 35-55.

Schäfer D, More than a fading flame. The physiology of old age between speculative analogy and experimental method. In: Horstmanshoff M, King H, Zittel C (eds), Blood, Sweat and Tears. The changing concept of physiology from Antiquity into Early Modern Europe. Leiden: Brill; 2012. pp. 241-266.

Sudhoff K, Erstlinge der Pädiatrische Literatur: Drei Wiegendrucke *über* Heilung und Pflege des Kindes. München: Münchener Drucke; 1925.

Vuolanto V, Child and Parent in Roman Law. In: du Plessis PJ et al. (eds), The Oxford Handbook of Roman Law and Society. New York: Oxford University Press; 2016.

- 1. See Prosperi A, Dare l'anima. Storia di un infanticidio. Torino: Einaudi; 2005. pp. 129-131.
- 2. Quint. Inst. I 1, 18.
- 3. See Varr. De l. L. VI 7, 52.
- 4. See *DELL* s.v. Infans, Infantis.
- 5. Cfr. Rawson B, Children and Childhood in Roman Italy. New York; Oxford University Press; 2003, pp. 135-136; for a quick excursus on the scan of the ages of man from the Greek world to the Renaissance see Harcum CG, The Ages of Man: a Study suggested by Horace, Ars Poetica, Lines 153-178. The Classical Weekly 1914;7(15):114-118, 114-115.
- 6. See Quint. *Inst.* I 1, 19 where the author binds, without passing through *pueritia*, *infantia* and *adulescentia*.
- 7. *Contra* Rawson B, Ref. 5, p. 136; see Knothe HG, Zur 7-Jahresgrenze der 'infantia' im antike Römischen Recht. SDHI 1982;XLVIII:239-256.
- 8. See Cilione M, Pythagorica Medica. Scienza e sapienza nella tradizione preippocratica. Roma-Bristol, CT: L'Erma di Bretschneider; 2022.
- 9. See Albanese B, Le persone nel diritto privato romano. Palermo: Tip. S. Montaina; 1979. p. 434.
- 10. See D. 46.6.6 (Gai 27 *ad ed. prov.*) from which it can be deduced that Gaius distinguishes, as evidenced by Lamberti F, Su alcune distinzioni riguardo all'età dell'impubere nelle fonti giuridiche romane. In: Cagnazzi S et al. (eds), Scritti di storia per Mario Pani. Bari: Edipuglia; 2011. pp. 211-236, 216, three circumstances for the legally capable child because it is not subject to someone's *patria potestas: infans*, capable of pronouncing at least the *verba stipulationis*, capable of speaking and understanding the terms of the negotiating act.
- See Petermandl W, Kinderarbeit im Italien der Prinzipatszeit. Ein Beitrag zur Sozialgeschichte des Kindes. Laverna 1997;8:113-136, p. 115; Vuolanto V, Child and Parent in Roman Law. In: du Plessis PJ et al. (eds), The Oxford Handbook of Roman Law and Society. New York: Oxford University Press; 2016. pp. 488-489.
- 12. See Lamberti F, Ref. 10. pp. 213-214.
- See Amundsen DW, Diers J, The Age of Menarche in Classical Greece and Rome. Hum Biol 1969;41:125-132; Andò V, La verginità come follia: il "*PERI PARTHENION*" ippocratico. Quad stor NS 1990;25,75,3:715-737, 716; Cilione M, Gazzaniga V, Born to go Hungry: Female Physiology, Ethics and Dietetics from Presocratics to Late Antiquity. Byzantinische Forsch 2021;33:245-262, 251.
- 14. See Dean-Jones LA, The child patient of the Hippocratics: early pediatrics?. In: Grubbs JE, Parkin TG (eds), The Oxford handbook of childhood and education in the classical world. Oxford-New York: University Press; 2013. p. 108.
- 15. In the treatise *De semine* I 9 (Kühn IV, 542-543), Galen articulates intrauterine life in four steps: γονή, κύημα, ἕμβρυον, παιδίον.
- 16. See CH *Sept./Oct.* II and VII Joly; see also Cens. *De die nat.* 10, 5-6, which associates the numbers of physiological passages of state in embryogenesis (from seed to blood, from blood to flesh, from flesh to human figure) to musical scales.
- 17. See Lewis ME, The Bioarchaeology of Children. Perspectives from Biological and Forensic Anthropology. Cambridge: University press; 2007. pp. 82-84. Valuable table that marks the phases of "non-adult" age starting from intrauterine life (*Ibid.*, p. 99).
- 18. See Li Causi P, Diventare pienamente umani: la teoria dello sviluppo morale integrato nell'epistola 124 di Seneca. In: Giorgianni F, Li Causi P, Maggio MC, Marchese RR

(eds), Crescere/Svilupparsi. Teorie e rappresentazioni fra mondo antico e scienze della vita contemporanee. Palermo: University Press; 2020. pp. 107-126,108.

- 19. See Marchese RR, Le conseguenze del crescere. Una rilettura di Orazio, *Carmina* 4.10. In: Giorgianni F, Li Causi P, Maggio MC, Marchese RR (eds), ref.18. pp. 259-273.
- 20. See Repici L, Uomini capovolti. Le piante nel pensiero dei Greci. Pisa: Edizioni della Normale; 2020.
- 21. The reference to purple rose could allude to a health condition linked to the bright red color of healthy blood: the alteration of the humoral balance and therefore of the relative state of health is manifested through the alteration of the complexion. In this sense, the use of verb "verto" (v. 5) could have a medical-diagnostic value linked to the Greek correspondent ἐκτρέπειν (cf. Boehm I, Le couleur du corps chez Galien. Coloration naturelle et couleurs modifies dans la polychromie du vivant. In: Collard F, Samama É, Le corps polychrome. Couleurs et santé. Antiquité, Moyen Âge, Époque modern. Paris: L'Harmattan; 2018. pp. 11-22, 16).
- 22. It is a *topos* that marks the transition from adolescence to adulthood (see Catenacci C, L'eros impossibile e ruoli omoerotici (Simonide fr. 21 West), QUCC n.s.2000;66(3):57-67, 62).
- 23. If one accepts the reading "pluma" (v. 2), with all due respect to Fedeli P, Ciccarelli I (eds), Q. Horatii Flacci Carmina. Liber IV. Firenze: Le Monnier; 2008. pp. 455-459, which also seems consistent with the "involitant" of the next verse. The Hippocratic treatise *On the Nature of the Child* explicitly alludes to the possibility of comparing "the nature of a bird with that of a human being" (Giorgianni F (ed.), Ippocrate, La natura del bambino dal seme alla nascita. Palermo: Sellerio; 2012. p. 201).
- 24. See Laspia P, Per una crescita felice. Immagini della natura nell'ontogenesi umana all'interno del *Corpus aristotelicum*. In: Giorgianni F, Li Causi P, Maggio MC, Marchese RR (eds), ref. 18. pp. 147-183. Alexandrian poetry feeds on the science of nature: it is not surprising that Horace may have done the same.
- 25. See Repici L, ref. 20. pp. 8-10.
- 26. See Bos G, McVaugh M (eds), Al-Razi, On the Treatment of small Children (*De curis puerorum*). The Latin and Hebrew Translation. Leiden-Boston: Brill; 2015. pp. 15-30, 16.
- 27. See Sudhoff K, Erstlinge der pädiatrische Literatur: Drei Wiegendrucke über Heilung und Pflege des Kindes. München: Münchener Drucke; 1925. pp. VII-XXII.
- See Maggioni G, Paolo Bagellardo dal Fiume e il suo *Libellus de aegritudinibus et remediis infantium* (1472). Med. Secoli. 2009;21(3):1205-1224; Rinaldi M, Il dibattito pediatrico all'università di Padova tra la fine del Cinquecento e l'inizio del Seicento. In: Zucchello F, Perilongo G, Silvano G (eds), La pediatria a Padova. Una storia secolare. Roma-Bari: Laterza; 2022. pp. 35-55, 44.
- 29. It is no coincidence that the epistemological status of pediatrics emerges precisely in Padua where anatomical studies, including those on fetuses and children who died prematurely, would have progressively deconstructed one after the other the convictions of Galenism (see Ibid, pp. 44-45).
- 30. See Dean-Jones LA, Ref. 14. pp. 110-112.
- 31. See Gourevitch D, I giovani pazienti di Galeno. Bari: Laterza; 2001. pp. 9-10.
- See Giorgianni F, Ref. 23. pp. 55-57; Giorgianni F, Come un tenero virgulto: termini e ideologie della crescita nel pensiero greco pre-aristotelico. In: Giorgianni F, Li Causi P, Maggio MC, Marchese RR(eds), Ref. 18. pp. 79-94.
- 33. See Pl. Teag. 121 b-c.

- 34. Cfr. Men. *Perik.* 435-436; Cilione M, Gazzaniga V, La fabbrica dei figli: i Greci e la τεκνοποιία nelle fonti epigrafiche e letterarie. In: Capocci M, Cilione M, Giorgianni F (eds), I nomi del male e i segni dell'eredità. Pensare, nominare e curare la malattia "genetica" dai Greci a noi. Bologna: il Mulino; 2019. pp. 73-100, 91. On the meters of the inscription see Gallavotti C, Metri e ritmi nelle iscrizioni greche. Roma: Accademia nazionale dei Lincei; 1979. pp. 48-50.
- 35. CIG 3272 = GV 1166 = IGUR 4, 1702.
- 36. The inscription is placed on the epigraphic wall of Palazzo Barberini alle Quattro Fontane.
- 37. The information that places in a Christian church of Smyrna the discovery of the epigraph dates back to Thomas Reines (1682) and has been recognized as false (cfr. Petzl G, GVI 1166 — eine Krankengeschichte aus Smyrna?. Chiron 1981;11:303-308; Moretti L (ed.), Inscriptiones Graecae urbis Romae IV (1491-1705), Roma: Istituto italiano per la storia antica; 1990. p. 139). There is no clue within the text suggesting a Middle Eastern origin that would also support the density of medical competence of the inscription. Between the second and third centuries, in fact, Smyrna is one of the most beautiful cities of the Empire thanks to the reconstruction that took place after the earthquake of 178 by the will of Marcus Aurelius and through the intercession of Aelius Aristides (cfr. Distefano SS, Roman culture in a Greek context: Smyrna between the first and the fourth century AD. Some preliminary observations. In: Gavagnin K, Palermo R (eds), Imperial Connections. Interactions and Expansion from Assyria to the Roman Period. Volume 2. Proceedings of the 5th "Broadening Horizons" Conference (Udine 5-8 June 2017). Trieste: EUT; 2020. pp. 289-298, 292). But above all Smyrna is a lively cultural center where studies on Platonism and medical interests flourish. Around 149 the young Galen is in Smyrna for the death of his father and to spend a few days with two masters: the anatomist Pelope and the philosopher Albino. During his stay in the city, Galen wrote, among others, three books De pulmonis et thoracis motu (cf. Gal. Libr. Propr. II 1-5 Vegetti; Cadoux CJ, Ancient Smyrna. A history of the city from the earliest times to 324 A. D. Oxford; Blackwell; 1938. p. 266). In the same period, templar and theurgical medicine also received a strong revival in Smyrna, thanks to the construction of a temple dedicated to Asclepius (cf. Paus. II 26, 9; Ibid., pp. 267-268).
- 38. See Hesych. 6807 *εὐερνεῖς· καλῶς βλαστάνοντες A^{16} Latte (Cunningham).
- 39. Gal. In Hipp. Ep. VI I 5, 20 (= XVIIa 826 K.).
- Development (ἕκλαμψις) makes children more talented (βελτίονα) in terms of strength (δυνάμει) and reasoning ability (λογισμῷ).
- 41. Gal. In Hipp. Epid. VI I 5, 21 (= XVIIa 826 K.).
- 42. See Dean-Jones LA, Women's bodies in classical Greek science. Oxford: University Press; 1994. pp. 45-48; Dean-Jones LA, Ref. 14.
- See Mudry Mudry P, *Non pueri sicut viri*: Petit aperçu de pédiatrie romaine. In: Dasen V (ed.), Naissance et petite enfance dans l'Antiquité. Actes du colloque de Fribourg, 28 novembre-1^{er} décembre 2001, Orbis Biblicus et Orientalis 203. Fribourg: Academic Press; 2004. pp. 339-348.
- 44. See Dean-Jones LA, Ref. 14. p. 113.
- 45. See Cels. Med. III 23, 1.
- 46. See Gal. Temp. 1. 579-582 K.; Gal. HNH 15.185-190 K.
- 47. See Schäfer D, More than a fading flame. The physiology of old age between speculative analogy and experimental method. In: Horstmanshoff M, King H, Zittel C (eds), Blood, Sweat and Tears. The changing concept of physiology from Antiquity into Early Modern Europe. Leiden: Brill; 2012. pp. 241-266, 248.

- 48. See Graumann LA, Horstmanshoff M, "This I Suffered in the Short Space of my Life". The Epitaph for Lucius Anthimianus (CIG 3272; Peek GV 1166). In: Petridou G, Thumiger C (eds), Homo Patiens-Approaches to the Patient in the Ancient World. Leiden-Boston: Brill; 2016. pp. 23-80, in part. 47-68.
- 49. See Gal., Thrasyb., 18.55-56 Helmreich; Gal., Ars, 23.6-10 Boudon.
- 50. See Catalano P, Cilione M, De Angelis F, Gazzaniga V, Ancient Roman pathocenosis: an integrated medical journey. Bodeaux Paris: Ausonius Édition; (*forthcoming*).
- 51. CH Epid. 5.59.
- 52. See Catalano P, Cilione M, De Angelis F, Gazzaniga V, ref. 50.
- 53. See Jouanna J (ed.), (notes de Grmek MD). Hippocrate, Épidémies V et VII. Paris: Les Belles Lettres; 2000. pp. 158-159.
- 54. The use of neuter nouns Greek is supposed to be consistent with the idea of the transition to adulthood in conjunction with spermatogenesis and menstruation.
- 55. *Dig.* VI 1.31; Laes C, Child slaves at work in Roman antiquity. AncSoc 2008;38:235-283, 241.
- See Laes C, Children and Occupations in Late Ancient Rome (300-700 CE). In: Laes C, Mustakallio K, Vuolanto V (eds), Children and family in Late Antiquity. Life, Death and Interaction. Leuven: Peeters; 2015. pp. 79-109.
- 57. See CH Epid. IV 5, 164, 15.
- 58. See Flohr M, The world of fullo. Work, Economy, and Society in Roman Italy. Oxford: University Press; 2013. no. 63.
- 59. Juv. Sat. VI 397.
- 60. See Capasso L, Di Domenicantonio L, Work-related syndesmoses on the bones of children who died in Herculaneum. Lancet 1998;352:1634.
- 61. See Battistini A, Caldarini C, Catalano P, Di Giannantonio S, Pantano W, Zavaroni F, The work done in Rome by children and adolescents: hypothesis based on the anthropological analysis of three suburban necropolises of the imperial age. Medicina nei secoli 2022;34(3):21-30.
- 62. See Minozzi S, Catalano P, Calderini C, Fornaciari G, Palaeopathology in Roman Imperial Age. Palaeopathology 2012;79:268-283.
- 63. See Pl. *NH* 35, 196-198. For an overview see Monteix N, Les Lieux de métier. Boutiques et ateliers d'Herculanum. Rome: EFR; 2010. pp. 169-217.
- 64. Plin. NH 35, 175.
- 65. The legal tradition (see Porena P, Il lavoro infantile. In: Marcone A (ed.), Storia del lavoro in Italia. L'età romana. Liberi, semiliberi e schiavi in una società premoderna. Roma: Castelvecchi; 2016. pp. 663-794, 678) and iconographic (the frescoes of the *fullonica* by L. Veranius Hypsaeus, in particular VI 8, 2.20) testifies to the presence of children at work in the *fullonicae*.
- 66. Sen. Ep. 2, 15, 4.
- 67. See Orib. Coll. Med., Lib. Inc. 5, 5-8.
- 68. See Cilione M, Gazzaniga V, ref. 13. p. 252.