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[1] Joining Architectural Theory and Practice in the First Interdisciplinary Research Project (*Accademia Romana*, 1537–1555)

[2] »*qvasi tvtte l'arti, e principalmente l'Architettvra son composte di teorica, e di pratica*« = „All of the arts, but primarily architecture, are composed of theory and practice", Claudio Tolomei says in the introduction to his famous letter to Agostino de' Landi, written in 1542 and published in 1547.

[3] In this letter, Tolomei lays out in detail a very extensive program to study the theory, history and practice of ancient Roman architecture *and* its cultural contexts. The program's aim is to unite this knowledge with the best contemporary efforts to form the foundation for the architecture of the future. To achieve this, not only Vitruvius' *Ten Books on Architecture* would have to be studied, emendated, explaned, edited, translated and recapped for practical purposes in 11 printed volumes, but the program also describes 13 other volumes. These 13 volumes should contain: an urban history of ancient Rome to understand where and in which context each building was situated, an annotated representation of *all* known ancient buildings in Rome (and some in the environment), each accompanied by a historical and an architectural commentary. And similar annotated representations were intended in the other volumes for any parts of buildings which had been transferred in history, for ornaments and vases, friezes and reliefes, tombstones and statues, inscriptions and coins, machines and aquaeducts. Understandably, later research always regarded this program as 'megalomaniac', unfinished and simply unfinishable.

[4] Only one printed book, Guillaume Philandrier's *Annotationes* to Vitruvius from 1544, has been regarded as a result of this program —

[5] together with two volumes of drawings after sculptured tombstoned, sarcophagi and similar reliefs: the *Codex Coburgensis* in Coburg, Germany, and *Codex Pighianus* in Berlin.

[6] But recent research, starting with a large group of anonymous drawings documenting ancient Roman and the most important contemporary architecture from around 1545 has shown otherwise: Not only is this corpus of drawings *larger* than any other known stemming from one single comprehensive, systematic approach to document ancient and modern buildings carefully and very precisely, but there are also similar sources for other parts of Tolomei's program in manuscript form like drawings of artefacts and written recordings.

[7] And, it seems, almost all important books on Roman antiquity published after 1544 and up to 1623 can be related to the project described by Tolomei — because their authors were collaborators of his network and stood in close contact with each other *and* because these books fit very well into Tolomei's description.

[8] Tolomei admits that everybody would think that his programm could never be finished. But, he says, if his readers *knew how many* participants would share the workload among each other — comparable to a heavy, but divisible weight or to the hundreds of workshops working in a large city at the same time — no-one would be astonished that his program could be finished *in less than three years*! No modern reader regarded this as a serious claim

in any way, even though at least large parts of the personal network around Tolomei to which he alludes here were known at least since the 19th century. But these relations were not investigated: After all, modern scholarship tends to respect the boundaries between disciplines and does *not* look over the fences into the neighbouring fields, even though »trans«- and/or »interdisciplinarity« have been the 'fashion of the day' for almost 30 years now. This could be seen as an irony of history, because it seems to be exactly *this* subdivision among the historical sciences that was *invented* by Tolomei's network to share the workload: Almost all of the printed »foundation charters« of disciplines like numismatics, epigraphy, archaeology, cultural history of antiquity or the theory and history of architecture were written by members of Tolomei's network. Among them were several craftsmen who became architects, artists or antiquarians while this network worked was active in Rome between 1535 and 1555.

[9] If we turn back to the citation from the beginning, that architecture consists of theory *and* practice more than any other art and if we remember the 11 volumes planned to deal with Vitruvius, we may see a close relation between this part of Tolomei's program and a handwritten *proemio* to a new edition of Vitruvius by Antonio da Sangallo the Younger written in 1531 and updated in 1539.

[10] In it, Sangallo complains that all editions of Vitruvius were *full of* mistakes and errors, misinterpretations and dark or corrupt text passages, because their editors were either architects or craftsmen who did not master Latin well enough, *or* they were philologists who had no idea about architecture.

[11] In fact, one may counter, there was Fra Giovanni Giocondo who was both: a brilliant architect-engineer *and* a learned man, whose edition of Vitruvius from 1511 was the first fully illustrated. And Sangallo knew Giocondo from their contemporaneous activities at the largest European building place since antiquity: the new basilica of St. Peter's in Rome. But it was known already in the 1530s that Giocondo's edition contained at least some mistakes. And the lack of annotations did not help to understand Vitruvius' text at all. Therefore, it seems that Sangallo's aim is not to disregard Fra Giocondo, but to explain why he regarded it as absolutely necessary to constitute a collective of learned men *and* craftsmen to create the best annotated edition of Vitruvius that could be made and which would be helpful to both groups of readers. Sangallo himself was not a trained architect but a carpenter who started to work as a young man for his uncles Giuliano — himself a venerable architect and investigator of ancient Roman architecture — and Antonio the Elder. Together with Giuliano, Sangallo came from Florence to Rome at the beginning of Julius II's papacy when the young carpenter was 18 years old and soon became the »right hand« of St. Peter's chief architect Bramante. In fact, it is said that Sangallo's practical experience helped Bramante to solve some engineering problems in the process of the complex construction.

[12] For example, Sangallo designed the scaffoldings for the vaults of the naves which can be regarded the largest of their kind since Antiquity. They were so famous that even 50 years later they were published in print as part of Lafréry's *Speculum Romanae Magnificentiae,*

[13] and they were in use (or rebuilt) for almost a century. So, we may assume that Sangallo's experience as a craftsman who became the leading architect of his time gave some weight to his proposal that both, the practical *and* the philological knowledge, were essential for the understanding of Vitruvius. That Sangallo was a member of Tolomei's network at least until 1544, two years before his death, is proven by several sources, and therefore we may firmly assume that his ideas were not only *known* to Tolomei but had an *influence* on his program.

[14] During Sangallo's service as chief architect of St. Peter's from 1537 until his death in 1546, his closest collaborator and representative as the head of the »site office« was Antonio Labacco, whose last name was acquired through his fame as a meticulous surveyor of ancient ruins who knew how to calculate precisely with the *abacus*, Italian: *abac*[c]*o*.

[15] While Sangallo was absent from the construction place of St. Peter's or Rome at all due to his many projects and duties as papal architect, Labacco did not only serve as his representative but also as the head of the carpenters who built the scaffoldings and other constructive parts as well as the famous large wooden model of Sangallo's final design for St. Peter's. After Sangallo's death, Michelangelo chased out all the members of the *setta sangallescha* (the Sangallo clan) from St. Peter's, and Labacco had to find other occupations: He published five engravings showing the last project of his master — one of which you see on the top right — and published one of the first books with very precise measurements of ancient Roman buildings, his *Libro di Antonio Labacco appartenente a l'architettura* in 1553. It was printed on a press in Labacco's house and seems to have been intended as a sort of scrapbook that could be extended with more prints over time. The same press in Labaccos house and very similar printing plates were used later by Jacopo Barozzi da Vignola for his *Regola delli cinque ordini d'architettura* from 1562 to which I will return soon. Therefore, we may assume that Labacco, like Sangallo and Vignola, had a closes relation to Tolomei's circle.

[16] And this assumption is supported very well by the activity of a certain *Guielmo franciosio* at the *Fabbrica di San Pietro*: Guielmo is the main draftman of the large corpus of drawings after ancient and contemporary architecture mentioned above and made in the service of Tolomei's network. Among these drawings is a set documenting Sangallo's project for St. Peter's so precisely and comprehensively

[17] that one could still build it today: As far as I know, there is no comparable set at least up to the 18th century for any large building project. Guielmo's drawings constitute the largest part of the so-called *Codex Destailleur D* at the *Kunstbibliothek*, Berlin, dedicated to a single monument. This codex containes 120 sheets and with more than 800 single drawings, and is closely related to a complementary set of some 100 sheets at the *Albertina*, Vienna. But, as it can now be established: both groups together only form the *nucleus* of a group of of some 850 sheets with over 3'500 single drawings, mostly by anonymous French draftsmen like Guielmo who was named *Anonymous Destailleur* by Hermann Egger when he discovered the Berlin-Vienna connection in 1903. Altogether, some 20–25 draftsmen seem to

have been involved in the measuring campaign over almost two decades which documented mostly ancient Roman buildings with a systematic precision and methodological approach that would not be rivalled by later campaigns up to the 19th century — not even by Antoine Desgodetz in the 1670s.

[18] One very remarkable feature of almost all of these drawings is their deviation from the typical architect's drawing methods established by 1540 and developed mostly in the environment of the *Fabbrica di San Pietro*: As Christof Thoenes has shown, the requirements of this large and complex structure together with the attempts to reconstruct and understand the lost drawings described by Vitruvius led to the development of the modern standards for architectural drawings from Giuliano da Sangallo and Bramante via Raphael to Peruzzi and Antonio da Sangallo the Younger. This mentioned deviation is characterized by an astonishing inobservance of these established methods, most of all:

[19] the proportional, scaled representation of architecture, and the preference of unscaled drawings where every part has the size needed to record all the measures precisely: This, as I learned from Robert Suckale, is a main feature of French carpenters' drawings of the late middle ages: So, Guielmo and his colleagues used *this* method familiar to them as craftsmen to record as much measurements as possible in a single drawing.
Most of the buildings documented by the French group in the 1540s and 50s disappeared, were damaged or even destroyed over the course of the following centuries

[20]—therefore, they form an incredibly important source for archaeology and architectural history that still has to be rediscovered and rewon and will surely overthrow some of our believes. Of course, the concepts of this measuring campaig, its methodology and execution presumably do not go back to an ordinary craftsman like Guielmo who worked only for a short period directly in Labacco's workshop at St. Peter's — obviously, to copy the drawings there — but most of the time as a poorly paid handyman like his French colleagues at the *Fabbrica* whom we may identify with some of the other draftsmen. They were not trained draftsmen or architects, though it seems possible that the young

[21] Jean Bullant was a member of this group before he went back to France to become a leading architect. From some features in the drawings like the clear separation of the drawing area, underdrawings and corrections made by a more trained hand or the establishment of a reference system between plans and overviews of larger buildings and their parts, we may deduce that one or more experienced draftsmen or even archtitects were the leaders of the French group during the measurings.

[22] The first person that comes to mind here is the already mentioned Jacopo Barozzi da Vignola who later became famous through his *Regola delli cinque ordini* published in or shortly before 1562: It became one of the most often reprinted books in the history of architecture and is based on his experiences in the service of Tolomei's circle that Vignola's biographers Vasari and Egnatio Danti call an »*accademia*«. I cannot discuss here why this accademia *cannot* be identified with the *Accademia della Virtù* — as it has been

done by almost anyone writing about the studies of antiquity in the sixteenth century, including myself —, but this network seems to have regarded itself as the successor of the famous *Accademia Romana* founded by Pomponio Leto in 1464 and active until the *Sacco di Roma* in 1527: For instance, some of its last members were also active members of the new *Accademia* and may — or rather: surely have — transmitted to Tolomei's network the ideas pursued in the first *Accademia* regarding the edition of Vitruvius and other ancient texts and the study of the Roman antiquities. Vasari reports that Vignola measured »all the antiquities in Rome« in the service of this *Accademia* — but, unfortunately, no drawings attributable to Vignola himself have been found yet to support that claim. My assumption is that Vignola did not measure and draw everything himself but that he led, instructed and trained the group of craftsmen around Guielmo. Vignola himself did not receive a professional training as an architect but rather as a painter and only slowly moved over to architecture:

[23] And it was his immense experience with classical Roman architecture — and its non-existing 'system' of the orders — which made him one of the most renowned architects of his time and which led him to the development of his own system of the orders, demonstrated in the *Regola.* So, again, we find craftsmanship and practical experience paired with a knowledge of ancient architecture acquired in Tolomei's network that made a craftsman into a leading architect.

[24] Another important person from this network, though himself in Rome only for two years — at least, as far as we know by now — is Jacopo Strada. Today famous — or rather even: *infamous* — as a trader of antiquities, this remarkable man deserves a full rehabilitation as draftsman, printer, publisher and author, collector and advisor of collectors and patrons as well as an underestimated architect. The incredible informative upcoming book by Dirk Jacob Jansen, *Urbanissime Strada*, should start this rehabilitation. Strada was trained as a goldsmith in the workshop of Raphael's collaborator Giulio Romano in Mantova, but surely also learned much about architecture and antiquities from the architect of the famous Palazzo del Tè. For instance, Strada soon developed an interest in ancient medals and coins — and therefore, it is no wonder that he left the by far largest systematic collection of some 12'000 numismatic drawings *with* descriptions and annotations. This alone should raise the suspicion that his *Magnum ac Novum Opus* — today at the *Forschungsbibliothek* Gotha, Germany, and investigated only since 2015 in a research project — could have some relation to Tolomei's *Accademia* which, according to Tolomei's letter, planned to publish exactly such a work — though maybe not to this extent.

[25] We know that Strada wrote and published his first book on ancient coins, the *Epitome Thesauri Antiquitatum* in 1553 in Lyon —

[26] a so-called *Bildnisvitenbuch* using the portraits of ancient emperors and their family members to illustrate their biographies — as a sort of entrance card to the Roman antiquarian network of Tolomei.

[27] In Rome, Strada had young artists like Dosio working for him and documenting the medals and coins, but also statues and portrait busts or even Raphael's *Loggie* in the Vatican Palace in coloured drawings. When he — like many others of this network — left Rome in 1555 after the untimely death of Marcello Cervini, its *spiritus rector* and for the last three weeks of his life Pope Marcellus II — Strada went to Venice where he published two books by Onofrio Panvinio, who went angry because of several mistakes in them, so that Antonio Agostín, the 'father of numismatics', had to intervene.

[Agostín's short passage about the achievements of people like Strada, Ligorio, Goltzius and Enea Vico in the process of understanding ancient objects unfortunately has been misread and mistranslated by Mandowsky and Miller in their book on Ligorio, and since then has influenced the image of these non-academic artists-antiquarians in modern research: In fact (and in opposition to Mandowsky-Miller's interpretation) Agostín expresses his *admiration* for these artists, because they were trained to look and study objects of art very carefully and, therefore, were able to recognize things that the 'studied antiquarians' could not interpret and understand correctly. So, Agostín should be regarded among those of his times confirming the highly valued importance of a good training in the arts and crafts for the learned study of Antiquity.]

[28] But Strada also worked as an architect: Though a source from the imperial court calls him »our building master to all our buildings here« in Vienna, we have no firm proof yet that he really took part in the design, planning and execution of buildings other than the *Antiquarium* in Munich. But, as Dirk Jansen has shown, it is possible to ascribe to Strada not only the *Antiquarium*, planned for the collections of antiquities and books acquired by the Bavarian Prince Albrecht V with Strada's help, but also the *Stallhof* in Vienna, around 1558 presumably the largest Renaissance palace north of the Alps and comparable only to the Palazzo Farnese (with a strikingly different approach to the orders of the courtyard). Even the unfinished *Schloss Neugebäude* (that is: the New Castle Building) near Vienna could be Strada's work. So, if you look for exhibition galleries from the Renaissance, the two largest presumably are the work of Strada, who — on the other hand — already deserves a place in the »Eternal Hall of Fame of Architecture« for acquiring and publishing Sebastiano Serlio's *Seventh Book*.

[29] Finally, another craftsman has to be mentioned who became a leading architect in Tolomei's circle in Rome: During the 1540 Giangiorgio Trissino — who already had been a member of the first *Accademia Romama* before 1527— brought the young stonemason Andrea di Pietro della Gondola to Rome, where he took care of his education through the study of Roman antiquities and gave him the name *Palladio*. The rootedness of Palladio's buildings and books in precisely these studies of antiquity as well as their influence on any later architecture can hardly be overestimated. Though the vast research on Palladio is filling entire libraries, it does not seem that anyone ever asked *how* the young stonemason should have had the financial means to engage helpers, the ability to develop the conceptual frame of his studies and, finally, the know-how to measure the Roman buildings:

[30] Some of his drawings are closely relatable to the circle around the Berlin *Codex Destailleur D*

[31] — as Heinz Spielmann observed already in 1966 —,

[32] and some drawings from this circle, made by anonymous French draftsmen including Guielmo franciosio, can be found among those attributed to Palladio and his workshop. That Palladio was introduced to Tolomei's Roman circle and collaborated with it is also confirmed by a note accompanying an inscription in the *sylloge* of Jean Matal, Agostín's close friend and secretary, today in the Vatican Library and the »foundation stone« of Theodor Mommsen's *Corpus Inscriptionum Latinarum*, started in 1853 and still active today at the *Berlin-Brandenburg Adacemy of Sciences*: There, Matal notes that an inscription was sent by Palladio from Vicenza via Ligorio to Rome.

[33] Another astonishing fact is that Trissino's friend Daniele Barbaro in or around 1555 decided to publish an annotated translation of Vitruvius *even though* Barbaro had no relation at all to architecture and its theory before. Therefore, he engaged the young Palladio to provide the illustrations for his translation and the Latin edition of 1567 *and* to help him understand the technical parts of the ancient text — so, we may say, that the collaboration of both, the stonemason and craftsman who became an architect by studying ancient buildings, and the learned patriarch of Aquileia who had studied Latin and Greek early in his youth: that this collaboration did not only fulfill what Sangallo had advised in his *proemio* in 1531/1539. But this collaboration also led to two results, the the Italian translation of Vitruvius from 1556 and the Latin edition of 1567, both annotated and illustrated and, therefore, corresponding remarkably precisely to two of the books described in Tolomei's program. — Though there are many more similar observations that allow to see Tolomei's network or *Accademia* as the roots of the modern historical disciplines *and* the scientific study of ancient Roman artefacts long before *archaeology* was „invented" — according to modern historians —, the role of architecture and, therefore, of craftsmen and/or architects who usually started as craftsmen during those times in this first international and interdisciplinary research project developed by Tolomei's circle (and going back, at least, to the early approaches of Raphael and the first *Accademia Romana*) can hardly be *overestimated*: neither with regard to the development of the historical studies *nor* to their influence on the development of Western architecture — which was the *explicit aim* of Tolomei's project! And who would doubt the longlasting architectural influence of Vignola and Palladio while walking through our cities? But Tolomei's project and its realization is — with regard to the topic of this session — also important because it may teach us what can be achieved by *true* interdisciplinary cooperation not only among the historical sciences but also among persons representing *theory* ***and*** *practice*. — Therefore, a full reconstruction of Tolomei's interdisciplinary network joining architecture in theory and practice, learned men as well as craftsmen who became architects, and the regaining of their working results and their interrelations, respectively, promises to offer a lot of

[34] *News from ancient Rome.* — Thank you.

Agostín (according to Mandowsky-Miller): »But how can it be«, his [Agostín's] questioner ask »… that without properly understanding Latin Ligorio could write so well about these things?« – »No otherwise than Hubert Goltzius, Enea Vico, Jacopo Strada and others«, Agustín replied. »From their works you might imagine they had read all the Latin and Greek books ever written, whereas all they did was to utilize the learning of others. The value of their work lies not in what they wrote but in the excellence of their drawings.«

Original: A. [= Agustín] »[…] Del Circo Massimo, & de gli altri, che erano in Roma, non ho veduto medaglie, ma solamente certi disengi di Pirro Ligorio Napoletano amico mio, grande antiquario, & pittore, il quale senza sapere la lingua Latina, hà scritto più di quaranta lbri di medaglie, & di edificij, & d'altre cose.[…] Antwort von A: "Et come scriuono Humberto Golzio, Enea Vico, Iacopo Strada, & altri, che chi legge i lor libri, crederà sempre che habbiano veduti, & letti tutti il libri Latini, & Greci, che si truouano scritti? Si aiutano co[n] le fatiche d'altri, & con disegnar bene col penello fanno altrettanto che con la penna. Ma torniamo alle medaglie.«