MADE:
Design Education & the Art of Making
26th National Conference on the Beginning Design Student
College of Arts + Architecture
The University of North Carolina at Charlotte
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MADE: Design Education & the Art of Making examined the role of making past, present & future, both in teaching design and in the design of teaching. The conference addressed theories & practices addressing fabrication & craft in all studio disciplines, and to take measure of their value in pedagogies of beginning design.

Paper presentations delivered a set of eight themes derived from the overall focus on Making. The team of moderators drove the agenda for these themes, and arranged paper presentations into specific sessions indicated by the schedule. Abstracts were reviewed in a blind peer-review process.

Conference co-chairs:
Jeffrey Balmer & Chris Beorkrem

Keynote speakers:
Simon Unwin
David Leatherbarrow

Session Topics
Making Real
Moderator: Greg Snyder
Making Virtual
Moderators: Nick Ault, David Hill
Making Writing
Moderators: Nora Wendt, Anne Sobiech-Munson
Making Drawings
Moderators: Thomas Forget, Kristi Dykema
Making Pedagogy
Moderator: Michael Swisher
Making Connections
Moderator: Janet Williams, Patrick Lucas
Making Masters
Moderators: José Gamez, Peter Wong
Making the Survey
Moderators: Emily Makas, Rachel Rossner
Open Session
Moderators: Jennifer Shields, Bryan Shields

Paper abstract reviewers
Silvia Ajemian · Nicholas Ault · Jonathan Bell · Julia Bernert
Gail Peter Borden · Stoel Burrowes · Kristi Dykema
Thomas Forget · Jose Gamez · Laura Garafalo
Mohammad Gharipour · David Hill · Tom Leslie
Patrick Lucas · Emily Makas · Igor Marjanovic · Andrew McLellan
Mikesch Muecke · Gregory Palermo · Jorge Prado · Kiel Moe
Marek Ranis · Rachel Rossner · Bryan Shields · Jen Shields
Greg Snyder · Ann Sobiech-Munson
Michael Swisher · Sean Vance · Nora Wendt
Catherine Wetzel · Janet Williams · Peter Wong · Natalie Yates
Suspecting that dramatic modes of inquiry may enliven the study of architectural history, I recently invited a group of students in a history and theory seminar to compose and perform dialogues. In lieu of writing an essay on an architect and their work, each student was invited to study and figuratively become a particular architect from the past, and—in this way—converse with one another on topics of enduring architectural concern. Using their architect’s own words (as selected from primary sources), the students rehearsed and gradually composed plausible verbal exchanges. Over the course of the term they elaborated these exchanges in written compositions, while concurrently crafting the situation and choreography of an interactive discourse. An edited script, complete with stage directions, was ultimately produced, and the seminar culminated with a live performance before a group of interested colleagues and classmates in the central space of the school of architecture.

This single public enactment, together with the term-long preparations, attempted to make certain architectural dilemmas dramatically present both for the individuals involved in the seminar and for those witnessing the event. The seminar sessions and public showing also aimed to make “history” perceivable as vital inventive work—not something readily received from the autonomous past, but an interpretive activity willfully pursued and collaboratively figured-forth with relevance in the living present. While this particular course was devised as a seminar, its premise is adaptable to other arrangements. The pedagogical premise—that dramatizing history is valuable as a mode of inquiry—is itself pertinent since it raises questions concerning the basic aims and expectations of architectural history courses and their assignments. In other words, proposing drama as a mode and model of historical inquiry is one way to reevaluate our relation to and participation with history—specifically, with the history of architectural intentions and topics.

In the discussion that follows, I will describe more fully the pedagogical approach initiated in this seminar. I will also turn, intermittently, to consider some of the theoretical motivations, historical underpinnings, potentialities and problems of such a dramatic approach to architectural history.

**Figuring History**

First, the pedagogical approach. As stated above, in lieu of individually writing essays on architects, the central assignment for the students in this class was to collaboratively figure-forth dialogues as architects. To this end, the seminar advocated speaking dramatically to and through particular architects over writing more distantly on or about them. During each seminar session, then, the students—as architects—took turns posing questions and telling stories to us; we, in reply, asked questions and posed concerns to them; and, they anachronistically conversed with one another. Whereas select readings from primary sources grounded the students’ study of individual architects, improvisational activities opened-up vitalizing discursive modes. These improvisational activities, engaged early in the term, involved speaking in persona (prosopopoeia) and in ensemble: in rapid-fire exchange, in unison, in the round, in surprising situations, in ambulating configurations, and in manners diversely motivated. The verbal source material for this situ-

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1 Norwich University, Vermont, Dec. 12th, 2006. I would like to thank Arthur Schaller, Dean of the School of Architecture and Art at Norwich University, for his support during the development of this seminar. Grateful acknowledgment is also made to the students who participated in the seminar: Josh Chafe, Heidi Dobler-Ludro, Gavin Engler, Matt Kozikowski, Matt Lawton, Sam Rank, Danielle Rupert and Cris Salomon.
ated, discursive and mimetic play was drawn from architectural writings as well as from poetry and plays; notably, from the poetry of Francis Ponge (including Soap) and from the stage directions of plays, such as Henrik Ibsen’s Master Builder. As Adrian Forty has recently re-emphasized in his book Words and Buildings, verbal discourse is integral to an architect’s work, both as a primary way of articulating intentions and as a complementary mode of architectural invention. Thus, at one level, by encouraging verbal play, the seminar offered architecture students an opportunity to exercise their speaking skill—not only as a persuasive technique but as an ethical, interpretive and generative mode of representation; while, at another level, the improvisatory activities invited the students to wonder about the interrelations between an architect’s prospective and historical imagination.

Speaking figuratively to and through particular architects was, however, of equal pedagogical concern. In this regard, I must make an important disclosure about the selection of architects, since the peculiar cast of individuals studied and brought to life in this seminar consisted of a mix of exemplary figures—mythic, fictional and historic. These included: the mythic architects Daedalus and Trophobus (whose stories of creation and conflict were drawn from the poetry of Ovid and Homer, and from the periegetic writings of Pausanias). The cast also included the god Prometheus (whose trouble, upon bringing fire and techne to mortals, was taken from the works of Hesiod, Aeschylus and Plato). Certain dramatic protagonists that are figuratively entitled “architect” also entered the mix; specifically, Palaestrio (a cunning slave who outwits a braggart and restores harmony in an ancient Latin comedy of Plautus), and Aaron (a troubling agent who agitates the plot of Shakespeare’s “most lamentable” of tragedies, Titus Andronicus). Also included in this cast of exemplary architects were more legendary and historical figures; namely, Eupalinos, Imhotep and a representative Master Mason—the speculative activities of whom were either read from 20th century poetry (specifically, Paul Valéry’s prose dialogue “Eupalinos”), or else gleaned from constitutional documents (including, certain Egyptian inscriptions, and the lodgebooks of Medieval masons). Finally, Leon Battista Alberti took part in this ensemble as a crucial mediator. He mediated, however, primarily in the guise of “Lepidus” (Latin for “Witty”). For Alberti, “Lepidus” was both a pseudonym under which he wrote an early comic play (called Philodoxus, “Lover of Glory”), and a persona—a melancholic figure who speaks-out resolutely in a number of his allegorical Dinner Pieces.

**Dramatic Discourse**

Such a cast of “architects”, as was gathered for this seminar, is admittedly eclectic and largely marginal to architectural histories. The particular selection, however, was both cogent and apropos since it involved not only architect-figures, such as Daedalus and the dramatic protagonists, whose stories dramatize certain

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3 On historical imagination (the poetic, projective and representational task of historians), see Ricoeur 1984.

4 Ovid’s Metamorphosis 8.100-271; Homer’s Iliad 18.590-605; Homeric Hymn to Apollo, esp. lines 244-299; Pausanias’ Description of Greece 9.37-14.

5 Hesiod’s Theogony 507-616, and Works and Days 47-106; Aeschylus’ Prometheus Bound; and, Plato’s Protagoras 320d-323a.

6 Plautus, Miles Gloriosus. The comic protagonist is called “architect” at lines 901-3, 916-20. Four other Latin comedies of Plautus (all from circa 200 BCE) likewise involve architect-figures: Amphitryon, line 45; Mostellaria, line 760; Truculentus, line 3; and Poenulus line 1110. In ancient Greek drama, “architects” figure into Euripides’ satyr play Cyclops (line 477); and, Aristophanes’ comedy Peace (line 305). My own PhD dissertation (nearing completion) treats these architect-figures from ancient Greek drama in detail. See: Budge 1914.

7 Aaron is entitled “chief architect and plotter of these woes” in Shakespeare’s Titus Andronicus (act 5, scene 3, line 122).


9 The Egyptian texts (known from tomb inscriptions and papyri), include: “The Autobiography of Herkhuf”; “The Song of the Harper”; and “The Instructions of Tuat” (or, “The Satire on the Trades”), as found in Budge 1914. The texts pertaining to the Medieval mason are “The Constitutions of Masonry” and “The Regius Poem”, found in Harvey 1972.

architectural dilemmas, but also architects who themselves worked or wrote dramatically, such as Alberti.11 It is helpful here to expand on this second category, since one could assemble more architects who, like Alberti, engaged dramatic modes of composition. Such an assembly would include Alberti’s contemporary Filarete, whose 15th century treatise on architecture is written as an extensive dialogue. As the primary speaker within this dialogue, Filarete rehearses for a curious patron all of the “modes and measures of building”, and further elaborates—over the course of a long meandering conversation—the design for a hypothetical city.12 In addition to Alberti and Filarete, this assembly of architects composing dramatically would also include Bernardo Palissy, whose 17th century treatise of horticultural, magical and architectural topics similarly proceeds as a probing dialogue between a questioning interlocutor and an answering author—who, at one point, rehearses for his questioner yet another animate debate. This debate (within the dialogue) is played out among a set of personified geometrical tools, each vying for honor.13 Gian Lorenzo Bernini would also join this assembly of architects who wrote dramatically. For, in the 17th century Bernini was not only designing architectural, sculptural and theatrical settings, but was also himself producing dramas, writing comic plays and acting in them. Of the approximately twenty plays he wrote, only one is extant. It is called The Impresario—a commedia dell’arte, in which the desire for spectacle and the making of drama are themselves satirically dramatized.14 Interestingly, Bernini was himself performing as Impresario at the same time he was preparing to stage, architecturally, the dramatic “Ecstasy of Saint Theresa”.15 In the same century, Guarino Guarini also penned a play intended for the stage and, so, joins this assembly of architects writing dramatically. This play of Guarini’s involves over thirty speaking parts, yet its plot revolves around a single man who first loses and then regains his sight.16 Interestingly, Guarini composed this play just a few years prior to composing his own complex theory of vision, and not long before he began to architecturally negotiate the appearance of light and its opposing substance darkness in the course of designing the Chapel of the Holy Shroud in Turin.17 In the 18th century Piranesi continued this dramatic tradition with his Opinions on Architecture—a debate played out in words and plates, in which Didascalo (the “Straight Talker”), defends architectural ornament and innovation against a detractor.

11 A number of Alberti’s other writings are also composed as dialogues, including: della famiglia (“On the Family”); Momus (a political allegory); and Profugiorum ab aerumna (“On the tranquility of the Soul”), which involves an architectural allegory, on which, see: Smith 1992, chp. 2.

12 Antonio de Piero Averlino (or Filarete, “Lover of Virtue”), Trattato de architettura (1469). See, Spencer 1965.

13 Bernardo Palissy, Recepte Véritable (La Rochelle 1563). See: Palissy 1988: pp. 174-177. In this debate (set within the dialogue) each tool—compass, rule, set square, plumb bob, level, adjustable square and astrolabe—voices its own claim to honor and preeminence. The “author”, in the end, weighs in on their debate. Taking the role of judge, he emphasizes that what is most at stake is not their relative honor or preeminence but the honor of the man who knowingly formed them. Such a debate among personified tools must have been a topos, for the debate in Palissy’s dialogue is prefaced by an anonymous 15th c. English poem, in which a variety of carpenter’s tools—compass, line, chalk, rule, chisel, saw, plane, file, various axes, and more—debate the virtues not of themselves but of their handler. See: Wilson 1987. A short commentary on this poem is also found in Salzman 1952: pp. 340-342.

14 Bernini 1994. This play was likely intended for performance during the 1644 Carnival season in Rome. See, Lavin 1980: pp. 146-157.

15 This sculptural work (for the Cornaro Chapel of Santa Maria della Vittoria in Rome) was likely commissioned in 1644 (completed in 1652). See, Borsi 1984: pp. 160-71, 313-14.

16 La Pietà Trionfante (Messina 1660). It is my understanding that this play exists as a manuscript in the Vatican Library. For a synopsis of it, see: Meek 1988: pp. 25-6. Meek classes the play as a “tragicommedia morale” (p. 19), and notes that it was intended for performance by members of a boys’ choir.

17 Guarini’s theory of vision is articulated in his dialogue “De Luce” and in a chapter of his Placita Philosophia, “De Vita” (1665), which he began to compose in Paris in 1662. Guarini was commissioned to take over the design of the Turin chapel in 1667. For a discussion of this design in relation to his negotiation of light and material (as well as spirit and matter, appearance and surface, logos and flesh), see: Debanné 1999.
of Piranesi’s designs.\textsuperscript{18} And, one could go on gathering architects into this dramatically discursive assembly.\textsuperscript{19}

Each of the architects named above, who wrote either dramas or dialogues between the 15th and 18th centuries, were, on the one hand, participating in modes of composition that were fashionable at the time. Writing in dialogue form was particularly widespread, having been a common literary genre for centuries. Charles Perrault, for instance, brother to the architect Claude, used the form of a dialogue (set in the gardens of Versailles) when he advanced his rather one-sided views favoring the moderns over the ancients in his influential version of this longstanding “quarrel”.\textsuperscript{20} Yet, such rhetorical, discursive and dramatic modes of composition had not traditionally served simply as stylistic scaffolds for shoring up predetermined arguments. Rather, they performed as genuine interpretive devices for probing the complexities and potentialities of difficult topics. These modes of composition—of playing-out hypothetical discourses in particularized settings for the sake of vividness and topical suggestiveness, and of speaking alternatively from “different points of view” (\textit{in utramque partem}) for the sake of procuring comprehensive understanding and of finding new insights—these modes were demonstrated by the first Greek philosophers; promoted in the first Latin handbooks on rhetoric; practiced by poets, preachers and others through-\textsuperscript{18} Parere su l’architettura (1765), see: Piranesi 2002; with Wittkower, 1938, and Rykwert 1980, pp. 379ff.\textsuperscript{19} For instance, one could add the plays of Sir John Vanbrugh and Nicholas Le Camus de Mézières; as well as the dramatic trick that Brunelleschi is said to have played on his carpenter—a trick that was based on Plautus’ Amphitryon, and later turned into a play by one of his Renaissance acquaintances (now published as The Fat Woodworker). On the problematic significance of Brunelleschi’s trick for architects, see the preface of Tafuri 2006). One could further include certain architects who collaborated with poets (and patrons) in the staging of plays, particularly: Inigo Jones (whose vexed relation with Ben Jonson is discussed by Gordon 1949); and, Palladio (who staged the plays of his playwriting patron Trissino).\textsuperscript{20} Charles Perrault’s \textit{Parallèlle des Anciens et des Modernes} (1688-97). For a discussion of the significance of the dialogue form (among three distinct speakers) and its setting (Versailles), see: Hovells 1983. For the architectural significance of this quarrel, see the introduction of Perrault 1993.

out the Middle Ages; pursued by humanists in the Renaissance; and taught with rigor and wit throughout the same periods in grammar schools.\textsuperscript{21} As one scholar of this topic has argued, such modes of rhetorical and dramatic composition peaked in the English Renaissance (with Elizabethan drama), after which a culture of ambivalence, cynicism and disbelief in the value of such inquiry gradually took hold—a culture for whom (as Joel B. Altman puts it): “the faith in finding out was dying”.\textsuperscript{22} But, of course, such dramatic manners of inquiry persist. Moreover, the fact that speculative dialogues of various manifestations can be found in the writings of Louis Sullivan, Alvar Aalto, Louis Kahn and Sverre Fehn, shows that dramatic and rhetorical modes of inquiry persist as being especially relevant to architects.\textsuperscript{23}

Indeed, the enduring relevance of these compositional modes for architects has already been demonstrated above by the topics acted out in the dramas and dialogues of Alberti, Filarete, Palissy, Bernini, Guarini and Piranesi. For, the dramas and dialogues of these architects, though in some ways serving as delightful diversions from their architectural work also act as influential preludes and reflective complements to it. For instance, the dramatic conflicts involving desire and light as rehearsed by Bernini and Gurrarin in their plays were also played-out in their architectural works among analogous agents: material and phenomenal, mortal and divine. Similarly, Alberti’s manner of dramatically treating topics (in drama and in dialogue) prefigures his discursive manner of treating architecture in his later work on \textit{The Art of Building (de re aedificatoria)}. Though obviously not written as a play to be staged, this treatise nevertheless reads as an animated discourse among various agents

\textsuperscript{21} For a survey of this tradition and its involvement with philosophy, see: Kristeller 1979, and Grassi 1980.\textsuperscript{22} Altman 1978, p. 395 and 267. Altman lays out this argument also chapter 2 on “The Moral Cultivation of Ambivalence”.\textsuperscript{23} For instance especially of Louis Sullivan’s \textit{Kindergarten Chats} (Chicago 1918); Alvar Aalto’s imaginary interviews, and his hypothetical dialogue between an architect and a professor (Schildt 1997: pp. 263-265); Louis Kahn’s habit of quoting imaginary conversations during his lectures (see, for example: Twombly 2003, p. 76); and, Sverre Fehn’s conversational and graphic exchange with Palladio (Norberg-Schulz 1997: p. 108).
speaking out from across time; or, as David Leatherbarrow has put it: “The book is a city composed of many voices ‘exercising themselves in rivalry’.” 24 The ten books can be read in this dramatically discursive way because, throughout them, Alberti demonstrates his habit of taking counsel with diverse and divergent sources and advisors on each architectural topic he treats. At different times throughout his architectural treatise, Alberti speaks explicitly to this manner of inquiry; for he finds that taking animated counsel—with others and oneself—is an activity integral not only to his present task as a searching author striving to do justice to complex topics and questions, but also to the projective task of discerning architects striving in the course of design to fully consider the range of competing complexities and potentialities. 25

Given all this, it would seem, then, that by writing dramatically and in dialogue these architects (Alberti, Filarete, Guarini, and the others) were not only participating in modes of composition commonplace at the time, but were also engaging modes of rhetorical inquiry appropriate to their architectural work—or, as Alberti would have it, integral to it. What is significant to emphasize here is that architects and dramatists can be said to have shared modes of composition and inquiry—rhetorical, dramatic, and histrionic modes that the history and theory seminar in question also attempted. Now, let us return more particularly to this seminar.

Topical Rehearsals

If drama was the mode of inquiry attempted in this seminar, and if a mix of exemplary mythic, fictional and historic architects comprised the dramatic personae, what then were the topics of discourse? Obviously certain architectural topics were anticipated, and others not. To help initiate and ground the students’ own unanticipated discourse, appropriate topics concerning the architect’s role and means of representation were introduced at the start of the term. What became interesting, however, is that depending on which “architects” came together to speak, different topics came to the fore as being most salient. Following a series of combinatorial experiments conducted in the seminar room with varying groups of three, the following three groups and corresponding trio of topics gradually took shape and eventually gave rise to the culminating three-act performance. In the first group, Eupalinos, Imhotep and the Master Mason together addressed an enduring topic: the special significance of language and glyphs for architects. In this exchange, Imhotep voiced the significance of these as divine disclosure; Eupalinos, as poetic utterance; and, the Master Mason, as the oral and demonstrative means integral to teaching the lore of the craft. In the second exchange, the cunning Daedalus, the witty Lepidus, and Palaestrio (the comic protagonist from Plautus’ Miles Gloriosus), together spoke on a second tenacious topic: the ambiguous status of architects—ambiguous, because their exceptional savvy and soaring ambition ironically contrasts with their vulnerably medial position. For Daedalus, this ambiguity often led to tragic displacements; for the comic protagonist, ludicrous situations; and, for Lepidus, synthetic understanding. Finally, in the third act, Prometheus, Trophonius, and Aaron (the tragic protagonist from Shakespeare’s Titus Andronicus), together confronted a third persistent topic: the troubling allure of their peculiar arts—creative fire, affective speech, and other kinds of technē. Each of the three figures, in this last group, found these alluring arts to be powerful influences by which they not only succeeded in transforming situations for their own (and others’) benefit, but also succeeded in getting themselves (and others) into serious trouble. In the course of revealing their troubles—notably, the punishment they each received for overreaching in their arts—these architect-figures exposed the arts of judgment and reconciliation as being requisite complements to the more alluring modes of technē. These three concerns, then, each dealing in their own way with the peculiar status and agency of architects, comprised the topical

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25 For example, Alberti urges that all evidence, including that which is “hidden” and “obscure”, be sought, compared and “examined repeatedly” (1.5; cf. 1.1, 2.4, 9.8). Likewise, he advocates for individual “deliberation”, internal “counsel” and “mature reflection” (9.10), including weighing matters in one’s mind “again and again” (9.8). He also describes one’s reasoning process as holding “a secret argument and discourse” in the mind (9.5, Leoni).
grounds for the seminar’s rehearsal and culminating dramatic performance.

At this point, I must forgo a more detailed account of how the performative settings and situated choreography (including diverse props, emphatic gestures, timely sounds, and connective transitions) were together crafted by the students with the aim of suggestively extending the architectural topics of discourse. Instead, I will close by addressing some of the embedded problems and theoretical potentialities of this rhetorical, dramatic, and histrionic approach to history.

**Understudies and Understandings**

Clearly such an architectural history and theory seminar as I have described is not meant to take the place of an introductory survey class. The seminar’s format simply would not work with large numbers of students. Neither would it have much chance of success with students who did not elect themselves into such a participatory option. Further, due to its peculiar focus, the seminar’s content lacks comprehensiveness and, by its involvement of drama and myth, the seminar begins to stray from our discipline’s own crucial textual sources. Nevertheless, just as drama was both complementary and integral to the architectural work of Alberti, Filarete, Bernini, Guarini and the others, so such a dramatic approach might participate in some correspondingly integral, if partial, way to the inquisitive work of architectural history. Beyond this concern for its partiality (in content and in scope), such a histrionic mode of inquiry may also be problematic for its encouragement of individual audacity. Involving dramatic manners of action no doubt risks biased parody in lieu of open inquiry; and, further, may enable the competitive display of superficial buffoonery in lieu of developing the desired intellectual agility and profound engagement, such as is hoped one might gain by vigorously considering and seriously impersonating alternative positions and points of view.

Bearing such concerns in mind, it is nevertheless helpful to consider the theoretical value of such a histrionic approach to history. For, as a premise for studying architects from the past, engaging drama—even hypothetically as a model of inquiry—puts us into a curious relation to exemplary architects: to their topics, troubles and intentions. By speaking dramatically with and through these architects, one begins to act-out what certain philosophers of interpretation have called “reciprocal questioning”—a kind of exchange wherein a questioning interpreter enters into a dialogue with particular sources of the past; sources that, themselves being understood as active questions, also put the interpreter into ques-
In another sense, attempting to understand architects by studying them dramatically suggests that a researcher would be acting neither as an authority on the architect nor as a spokesperson for them, but more as an understudy to them—a more modest, if ambiguous, relation that nevertheless maintains the potentiality that the understudy might one day be called upon either to play an architectural role like the one under study, or else to participate in an agon comparable to that which the exemplary figure’s story represents. Finally, figuring architectural history as drama (even hypothetically) brings history forth as actions and agons to be witnessed and interpreted by a present, lively and inquisitive audience, thus opening onto further topics, questions and discursive exchange.

Works Cited


