

Interdisciplinary Translation

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DISCIPLINES AND INTERDISCIPLINARITY

To what extent is it possible to “translate” a project from one artistic discipline into another? The concept of translation is familiar to anyone who operates even briefly in more than one language but “interdisciplinary translation” is less familiar. Although this term may seem novel, it is based on a familiar experience: we observe something (a painting, a poem, a film) that reminds us of something else in another field (a building, a song, a play).

Interdisciplinary composition is also common: painters draw from music, musicians work with poetry, poets observe architecture, architects study paintings, etc. Such activities may be regarded vaguely as “inspiration,” “borrowing,” or “lateral thinking.” In daily life (as well as art), it is easy to make casual connections between disparate things, using our own personal associations. The concept of translation, however, presumes actions that are more rigorous and standards that are more collective. It suggests that others are relying on us, so we had better act responsibly. Although translation has been ongoing since the fall of the Tower of Babel, it became a conscious science less than two hundred years ago, when questions of biblical translation and historical detachment became urgent.¹

Until the eighteenth century, Western knowledge had been organized in a universal hierarchy, from the divine to the mundane. Education was pursued in the literary arts of the *trivium* (grammar, rhetoric, logic) and the liberal arts of the *quadrivium* (arithmetic, geometry, music, astronomy), with mathematics as an elevated art shared by divinities and mortals. For centuries, subjects such as music and architecture were linked theoretically on this higher mathematical ground. Conversely, the most important characteristics of music and architecture were those that could be represented mathematically:

simple pitch intervals in music and simple formal proportions in architecture.

As the Enlightenment gradually relinquished this universal hierarchy, academic subjects found themselves on the same level, side by side, in an encyclopedic arrangement. The premises of scientific research on which early nineteenth-century German universities were founded led to the modern framework of disciplines in which our academic activities occur.² Each discipline has since developed its own history, theory, and practices, and is housed in its own department at the university. Across this epistemological grain, interdisciplinary projects attempt to draw knowledge and resources from various

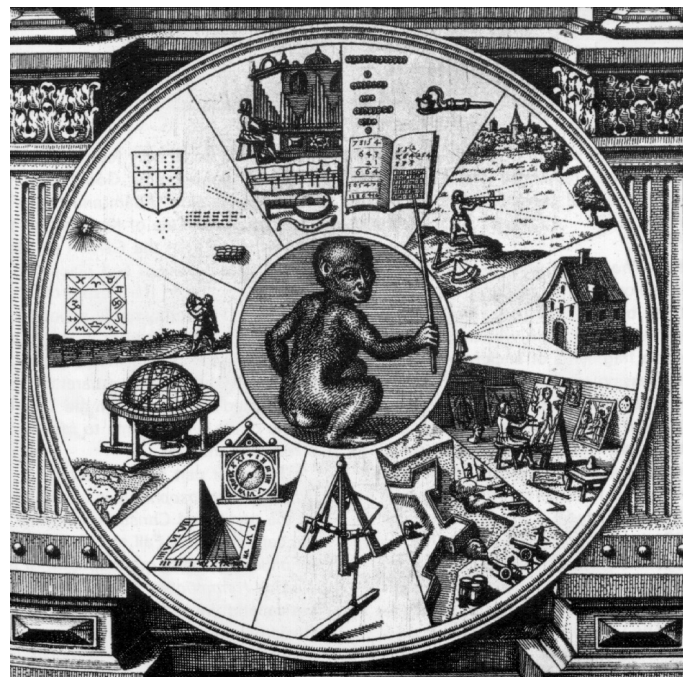


Fig. 1. *Man, the ape of Nature, continues Nature's work on earth through various arts and sciences, starting with arithmetic.* From Robert Fludd, detail of title page from *History of the Macrocosm, second treatise* (1618).

disciplines to deal with complex questions that no single discipline covers. Collaboration is the most common form of interdisciplinary activity. However, in this essay, "interdisciplinary" refers instead to a movement from one discipline to another: a translation. "Cross-disciplinary" and "transdisciplinary" are alternate terms that convey this directional movement.³

LINGUISTIC TRANSLATION

During the past forty years a branch of hermeneutics known as translation theory has provided theoretical parallels for the ongoing practical work of translators around the world. Some of its theorists have formulated practical methods and rules of thumb, while others have taken a step back to consider the concept of translation in a broader and more philosophical way.⁴

In an essay published in 1959, linguist Roman Jakobson identified three categories of translation — intralingual, interlingual, and intersemiotic — that continue to serve as a benchmark for writers in the field.⁵ *Interlingual* translation (between languages) is the most familiar mode of translation, in which a thought expressed in one language needs to be understood in another language. His second category, *intralingual* translation (within a language), is invoked when two people ostensibly speak the same language but are situated in different eras, locations, or social circumstances: for example, Chaucer and Bob Marley. Confusion arises when a word or a sentence is heard but its meaning is not understood. Resolving this tension requires someone who is familiar with both sets of worldly circumstances and can act as an interpreter. This mode of translation involves not just an equivalence of words but also a meeting of worlds, in what Hans-Georg Gadamer called a "fusion of horizons."⁶ Jakobson's third category, *intersemiotic* translation, designates "an interpretation of verbal signs by means of signs of non-verbal sign systems."⁷ It has one foot in verbal language and one foot in a non-verbal field such as painting or music. This mode of translation is cited occasionally by theorists but has not yet been studied rigorously.

Meanwhile, George Steiner has proposed a more radical premise: that the field of translation theory be expanded to encompass all meaningful exchanges, with linguistic translation as merely one case.⁸ In this expanded field, Jakobson's set of three translation categories would acquire a fourth — *interdisciplinary* translation — in which both disciplines are non-verbal and the normal linguistic connotations subside.

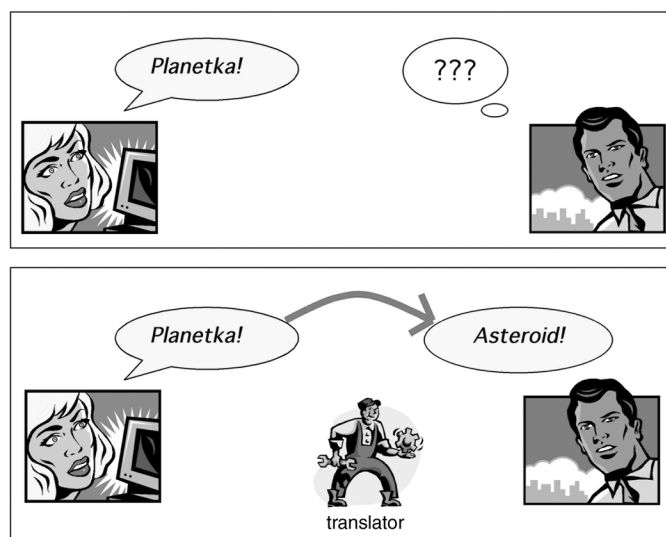


Fig. 2. Basic components of interlingual translation (performed by the Microsoft Clip-Art Players).

Interlingual translation (between languages) provides a useful reference for comparison. Its most basic format includes two phases (before and after translation) with six components:

- a) a speaker
- b) words in the speaker's language
- c) a listener
- d) an initial absence of understanding
- e) an interlingual translator
- f) equivalent words in the listener's language that enable understanding.

This structural description may suggest that translation is merely a mechanical process, and indeed, portable translating computers now assist tourists in exotic countries by providing not just words but also simple phrases and sentences. "Form-based translation" exchanges word for word, phrase for phrase, based on systematic equivalences between the two languages. In such situations the translator remains anonymous and invisible unless something goes wrong. The limitations of automatic translation are illustrated by the urban legend about an early Russian-English translating computer that translated the English phrase "out of sight, out of mind" into Russian, then back again as "blind idiot."

Since the advent of modern hermeneutics in the nineteenth century, advocates of "meaning-based translation" have warned of the pitfalls of "form-based translation" and encouraged translators and interpreters to become acquainted not just with words but also with the worldly contexts from which they arise.⁹ When

subtle cultural overtones must be acknowledged, a translator cannot rely on a superficial exchange of words and phrases but must also consider their sound, social circumstances, and historical meaning. Walter Benjamin suggested that “the task of the translator consists in finding that effect upon the language into which he is translating which produces in it the echo of the original. ... The language of a translation ... gives voice to the *intentio* of the original not as reproduction but as harmony.”¹⁰ Here the translator is playing a more pivotal role—no longer simply a faceless messenger.

Beyond the basic task of conveying messages between individuals, translation can also enable a body of literature in a remote or dying language to survive in another one—a variation on the urgent-message theme. A foreign element from that source language can also challenge and stretch the receptor language and highlight the discontinuities between them. Although translators normally aim for a smooth, seamless translation, some theorists have favored rough translations that import intrusive expressions and foreign ways of thinking.¹¹ Along these rough edges and irregular seams, translation may also reveal some underlying premises of a language. In a gnostic turn, Benjamin imagined that a silent, universal language—a pre-Babel *Ursprache*—underlies and influences all worldly languages, like “a hidden spring seeking to force its way through the silted channels of our differing tongues.”¹² These thoughts on linguistic translation may also apply to interdisciplinary translation.

TRANSLATIONS WITHIN ARCHITECTURE

The Latin etymology of “translate” seems rather simple: to transfer or transport something from one person or place to another. Physics uses the word to describe movement from one point to another, without rotation. “Translation” refers both to the act of moving and to its state after movement has occurred. These definitions seem rather innocuous because they disregard any qualitative field on which the movement is taking place. When this field is a language, with its embedded historical and social dynamics, translating something from one point to another is no longer simply a change in position. The same would apply in other qualitative fields such as rhetoric, medicine, law, and religion, in which the concept of translation has also appeared.¹³

Within architecture, the word “translation” has been used in a variety of situations but some are inappropriate because the basic components of a simple interlingual translation are not evident:

- a) “Translating” an idea into a design. (The original source does not yet exist as a form or substance, so a word such as “forming” or “manifesting” would be more precise.)
- b) Transporting a building from one location to another. (This would not qualify as a translation if the building remains unchanged and the two sets of circumstances are treated as neutral settings.)
- c) Transforming a design for a different material and/or construction method. (If the expectations and constraints are sufficiently demanding, this may qualify as a translation.)
- d) Transforming a design for a different historical or cultural situation. (Again, if the expectations and constraints are sufficiently demanding, this may qualify as a translation.)
- e) Developing a plan drawing into a model or building. (This is the mode of translation discussed by Robin Evans in “Translations from Drawing to Building.”¹⁴ He notes that drawings and buildings are independent presences separated by a representational gap that cannot be spanned systematically.)
- f) Representing a building in a drawing or model. (This is the inverse of the previous example: We appreciate representations that capture meaningful qualities of a building design and distinguish them from other representations that fail to do so.)

TRANSLATIONS BETWEEN OTHER DISCIPLINES AND ARCHITECTURE

These modes of translation within architecture deserve further theoretical study, comparable to what has been going on in the literary field of translation theory during the past forty years. However, in the present essay we are focusing not within architecture but at its edges, where it engages other disciplines. Examples appear occasionally, usually in an academic setting.

- a) Using a design from a visual art (e.g., painting) as the source for an architectural design. (To qualify as a translation, the source would have to be recognized as more than just a form. Translation theorists use the term “false friends” to warn of words that appear the same in both languages but have different meanings.)
- b) Using a design from a non-visual art (e.g., music) as the source for an architectural design. (With no obvious formal resemblance to provide a common denominator, this type of translation is especially

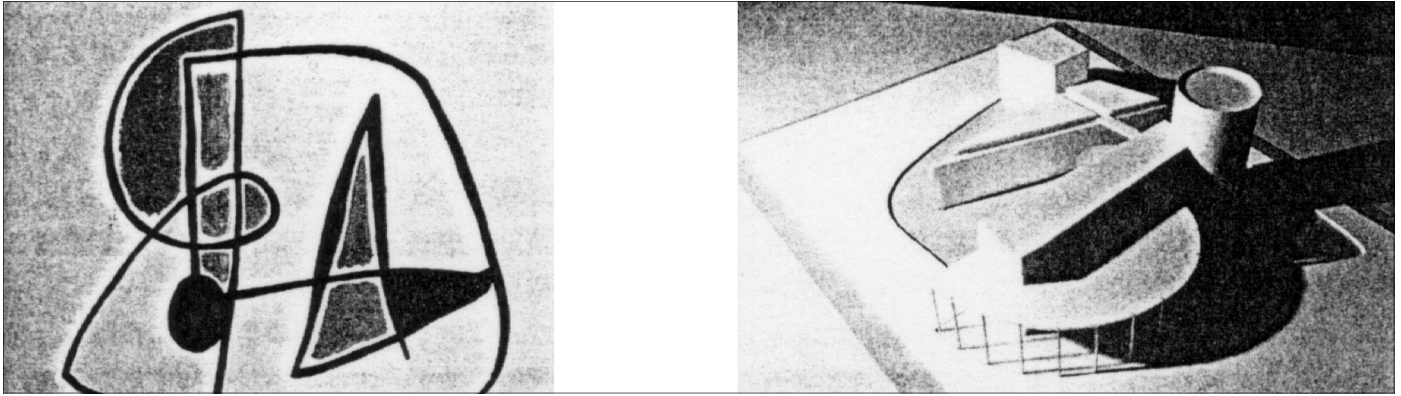


Fig. 3. A form-based translation. Source (left): Joan Miro, *Head*. Translation (right): Design for a library by a student from the Technical University of Vienna (1993). From Emmerich Simoncsics, "Applied Aesthetics," *Space Design* 12, no. 363 (Dec. 1994): 97-104.

challenging. Unfortunately, in projects involving music and architecture, translators typically fall short by neglecting the phenomenon of sound, as well as the social circumstances in which the music is performed, relying instead on narrow formal extractions from a composition's musical notation or structural organization.)

- c) Using a design from another field (e.g., gastronomy, medicine) as the source for an architectural design. (Here, translation is conceivable if the design is perceived experientially rather than objectively, and is interpreted as an intentional action in a historical situation. However, if the parallels are idiosyncratic rather than intersubjective, our attention will shift from the translation to the translator.)

Because architecture is not essentially a visual art, associations with a variety of disciplines are possible.

TRANSLATION EXERCISES

Studio projects in architecture schools often use paintings, sculptures, and even musical pieces as a source for an architectural design. Paintings provide a flat graphic composition that may be interpreted as a quasi-architectural plan or perspective. A student may then use formal operations such as extrusion and layering to generate a volumetric design at a particular scale for a particular purpose. To consider whether such an exercise constitutes a translation, we may use standards from translation theory to ask several questions: Is the translator fluent in both disciplines? Does the translator demonstrate a dual responsibility to the original source and the final destination? Is the translation somewhat reversible? In most cases, we would find that the original source has been used strictly as a formal generator, so the exercise is not a meaningful transla-

tion. Unless such exercises are bracketed narrowly as formal studies, they risk trivializing not only the concept of translation but also the disciplines with which they are working.

Along the way, we may also ask why music and painting continue to be such popular sources for architecture students, not just at the introductory level where constrained exercises encourage focused study, but also in senior thesis projects where boundaries of architecture are tested. Is this a personal detour that some students feel compelled to make, to see if their architectural career will have any relation to their previous interests? Or could there indeed be some latent but authentic connections between these disciplines, rather than just a formal resemblance or a vestigial common ground in mathematics?

During the past ten years I have conducted several graduate courses that considered prospects of interdisciplinary translation. In each case, architecture students attempted to make translations from other artistic disciplines (painting, sculpture, literature, music) into architecture. The results have been mixed but some interesting realizations were made along the way. The most recent version of the course focused on painting and architecture—a common alliance since the rise of *disegno* in the Renaissance. Each student selected a painting (preferably one that seemed compelling) and became acquainted with it through research, analysis, and interpretive exercises. Although the general appearance of the painting could be grasped in a quick glance, much more work was needed to recognize its painterly characteristics and understand its historical background and disciplinary significance. During this course we were joined periodically by a professor of fine arts who helped the students distinguish three intertwined parameters of painting:

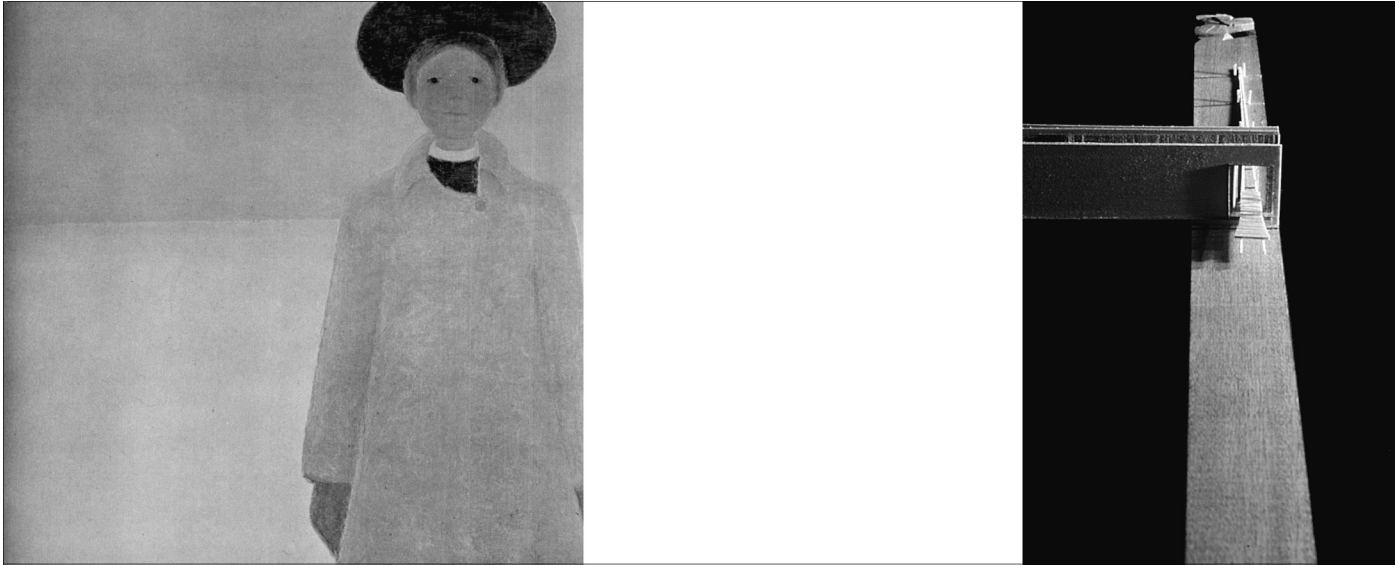


Fig. 4. A meaning-based translation. Source (left): Jean Paul Lemieux, *Julie et l'univers* (1965), oil on canvas, 104 x 112 cm. Translation (right): Audrey Archambault, *La poetique du souvenance* (Dalhousie University, 1997), architectural model in mahogany and basswood, scale 1:100. Student's description of the painting: "Lemieux's painting presents a relationship between Julie and the landscape she frames. Julie's coat represents her personality, links her to the ground, and emphasizes the ground's horizontal depth. The saturation, brightness, and contrast of the colors disturb the painting's foreground and background layers. The neutral appearance of Julie's face makes the painting seem mysterious and ambiguous. Her face, framed by the dark hat and blouse, brings the viewer's attention toward her eyes. The richness of their color reinforces the depth of the painting. They also express her view of the world and thus manipulate the viewer. Her eyes project through, and even beyond, the painting."

- a) A painting may be perceived as a presence: a flat composition of paint that is visible as tones and colors. It may also be perceived as a quasi-spatial composition in which these tones and colors are interpreted as depths and light: a virtual space that an observer can imagine inhabiting. Its physical details (e.g., brush strokes, translucent layers) may also highlight the materials and actions with which the painting was made.
- b) A painting may be perceived as a representation, especially if it includes figures such as people, animals, or familiar objects with which we can identify.
- c) A painting may be perceived as an expression of an idea and/or emotion. Its qualities may be difficult to describe literally but may be paraphrased metaphorically in words or images.

Most of the paintings emphasized one or two of these parameters—and so did the students' eventual architectural projects. The profile of each translation depended on whether the painting had strong formal, spatial, and/or material characteristics, and whether it could be perceived readily as a plan or perspective. An implicit narrative in the painting often suggested an architectural program. As with any design project, some students found it easier to make a few small connections at first and then develop the rest incrementally, whereas others made big leaps in a more holistic way.

For most architecture students, the reverse prospect of translating an architectural design into a painting would have been much more difficult, but this is consistent with the directionality of interlingual translation: it is easier to translate a foreign expression into one's mother tongue than to do the reverse.

Along the way, we formulated parallel sets of characteristics in painting and architecture, summarized in the following chart. This chart was useful as a reference for analysis and discussion; it was not used as a recipe for application. As with any theoretical scaffold, its categories were more convenient than universal. However, it did point out that disciplinary parallels exist between how painters work in their field and how architects work in their field. It also suggested that each discipline—and perhaps each characteristic—has a considerable historical background that may not be evident to architects who merely dabble in painting nor to painters who merely dabble in architecture.¹⁵

Translations are expected to make sense to a wider audience than just the translator, and we found that other translators may be most qualified to evaluate a translation. Within our group, there was surprising agreement on the degree to which a translation attempt was successful. In an interdisciplinary translation exercise there is no correct answer, but some are certainly better than others. Formal resemblances alone were insufficient; deeper associations were needed.

Occasionally, a satisfying “click” was evident when a translation finally resonated with its source, like the involuntary eruption of laughter when a latent connection is suddenly revealed between two things.¹⁶ Indeed, there is an intrinsic joy in making analogies.¹⁷ In a test of reversibility, we found that most outsiders can identify the original source of a translation from among a small number of options. After becoming more attentive to the premises and expectations of translation, we became quite critical of superficial translations and other design activities that have been misrepresented as translations.¹⁸

LIMITATIONS AND POTENTIALS

Robin Evans observed that architects working on representations act as if a seamless continuity exists between what is drawn and what is built: “Suspension of critical disbelief is necessary in order to enable architects to perform their task at all.”¹⁹ The same observation could be applied to interdisciplinary translation. Although we recognize that perfect translations are impossible, we act as if parallels exist and meaningful translations can be achieved. The Italian aphorism “*traduttore traditore*” (translator: traitor) illustrates that similar tensions exist between languages, where inevitable differences in meaning prevent an interlingual translation from being entirely faithful to its source.

Recognizing that the prospects of interdisciplinary translation are much less viable than interlingual translation, it is fair to ask whether such a notion should be pursued at all. For those of us who draw casually from other fields, the rigors of translation may expect an unnecessarily high standard in our lateral thinking. Because translation is typically associated with language, interdisciplinary translation also carries a residue from debates over semiology during the 1970s, in which

architecture was contemplated as a system of signs for storing and transmitting messages. It also faces the more recent legacy of deconstruction, in which words refer to one another in an endless series of references. It remains to be seen if a theory of interdisciplinary translation can sidestep these linguistic debates by invoking non-verbal experience in disciplines such as painting, music, and architecture. At the same time, our casual tourist tendencies tempt us to experience non-linguistic things at face value, at a glance, without pursuing a deeper knowledge of their characteristics and historical meaning, as we would expect of an interlingual translator who attempts to translate written poetry.

However, the insights that arise during a serious translation exercise suggest that this is an academic detour worth traveling. In literature, many writers have noted that translating others’ work exercises a different set of literary muscles than the ones they use as authors. Similarly, within architecture we may imagine creative roles for translators (rather than designers) to investigate tensions between ways of making, between cultural situations, and between representational modes. At the edges of architecture, where other disciplines are encountered, there seem to be opportunities for similar work. Interdisciplinary translation can no longer rely on a higher ground of mathematics to provide a sturdy (but narrow) bridge. We make things worse by pretending that the golden section is still golden, or by repeating vague generalizations such as the old chestnut “architecture is frozen music.”²⁰ Tracing authentic parallels between modern disciplines requires us to dig much deeper into their characteristics, their worldly circumstances, and their history, rather than focusing narrowly on their formal products. If, as George Steiner suggests, the edge conditions of translation offer a strategic site for detecting underlying premises of languages (or disciplines), that would be a bonus.

painting examples	PAINTING CHARACTERISTICS	ARCHITECTURAL CHARACTERISTICS	architectural examples
landscape, portrait, still life	Subject	Program	house, prison, chapel
<i>alla prima</i> , built-up	Mode	Mode	building, exhibit, procession
proportions, alignments	Geometry	Geometry	proportions, layers, collage
hue, value, saturation	Elements	Elements	façade, wharf, roof
foreground, middle, background	Location	Site	tundra, churchyard, blank slate
panorama, close-up	Scale	Scale	room, building, street
oils, watercolor, canvas	Media	Materials	earth, wood, concrete
glazing, scumbling, impasto	Technique	Technique	structure, construction
political, aesthetic, philosophical	Intention	Intention	political, aesthetic, philosophical
oneself, royalty, class	Audience	Audience	oneself, family, nation

Fig. 5. Parallel characteristics in painting and architecture, with examples from student projects.

NOTES

- ¹ See Richard Palmer, *Hermeneutics* (Evanston, IL: Northwestern University Press, 1969), 34-8.
- ² William Boyd, *The History of Western Education* (London: Adam & Charles Black, 1961), 336.
- ³ For terms and definitions, see Julie Thompson Klein, *Interdisciplinarity: History, Theory, and Practice* (Detroit: Wayne State University Press, 1990), 55-73.
- ⁴ For surveys of twentieth-century translation theory, see Edwin Gentzler, *Contemporary Translation Theories* (London and New York: Routledge, 1993) and Lawrence Venuti, *The Translation Studies Reader* (London and New York: Routledge, 2000).
- ⁵ Roman Jakobson, "On Linguistic Aspects of Translation," in *On Translation*, edited by Reuben A. Brower, 232-9 (Cambridge, MA: Harvard University Press, 1959).
- ⁶ Hans-Georg Gadamer, *Truth and Method* (New York: Crossroad, 1982), 273.
- ⁷ Jakobson, "On Linguistic Aspects of Translation," 233. See also Dinda Gorfée, *Semiotics and the Problem of Translation* (Amsterdam and Atlanta: Rodopi, 1994), 162-5.
- ⁸ George Steiner, *After Babel* (London: Oxford University Press, 1975), 279.
- ⁹ One practical guide is Mildred L. Larson, *Meaning-Based Translation: A Guide to Cross-Language Equivalence* (Lanham, MD: University Press of America, 1998).
- ¹⁰ Walter Benjamin, "The Task of the Translator," in *Illuminations*, translated by Harry Zohn (London: Fontana, 1973), 76, 79.
- ¹¹ Steiner, *After Babel*, 266; Benjamin, "Task of the Translator," 80-1.
- ¹² Steiner, *After Babel*, 64.
- ¹³ *Oxford English Dictionary*, s.v. "translate," "translation."
- ¹⁴ Robin Evans, "Translations From Drawing to Building," in *Translations from Drawing to Building and Other Essays*, 152-93 (Cambridge, MA: MIT Press, 1997).
- ¹⁵ Concurrent with this translation exercise, we examined relations between painting and architecture in work by Alvar Aalto, Will Alsop, Hiromi Fujii, Zaha Hadid, John Hejduk, Hundertwasser, Rem Koolhaas, Le Corbusier, Gerrit Rietveld, and Aldo Rossi.
- ¹⁶ Henri Bergson, "Laughter," in *Comedy*, edited by Wylie Sypher (New York: Doubleday, 1956), 83.
- ¹⁷ Keith Holyoak and Paul Thagard, *Mental Leaps: Analogy in Creative Thought* (Cambridge, MA: MIT Press, 1995), 9.
- ¹⁸ Some dubious examples of translation appear in *Architecture as a Translation of Music*, edited by Elizabeth Martin (New York: Princeton Architectural Press, 1994).
- ¹⁹ Evans, "Translations from Drawing to Building," 154.
- ²⁰ The origin of this early nineteenth-century aphorism has been attributed variously to Johann Wolfgang von Goethe, Friedrich Schelling, and Madame de Staël.