PROSTHESIS
Burgess Voshell


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Thesis Advisor

[^0]They il be expecting one of us in the

## Wreckage Brothers



${ }^{4}$ N Nomole vown

"Add Gas!"

This work is dedicated to the wreckage brothers. A greater group could not have been hoped for. This time spent in the oasis of criticality will be sorely missed.

Maxwell Dehne
Maxwell Dehne
Desmond DeLanty
Ryan McCaffrey
Nicholas Moore
Kun Wu


Provenance of the Barbaric
There Goes Your Candy Money Baby
Burna
Money Jungle: an Ellington Reference
Gusset Plates
ded
Because Now We Feel Guilty For Not Having Acted In Time Degen City

Harly Nally: A Criation Story with No "E"
Kahn With The Wind
Hola Macciafe
BELLYWORK
Center for Critical Discourse
Chin.
Your Mom's Favorite Architect
Rockefellers in the Jungle
an
\#Architecture
Chinatown: Global Phenomenon
Closing the Seal: Business as Usual, or The New ABC
Harpooning for Dummies 10
Panopticalism
Ten Ways to Surf
Brad Pitt Architect
Decidedly on The Fence (or, Fencing: A New Sport)
Towards a Now England
Myopiasm
The Velocity of Sickness: An Apology
Degens and Dragons
Forehead Dancing Towards Bethlehem
Top Gun Architects
Plait Tectonics
Biograhy fthe Devia
Re:Modeling Architecture
That's An Awful Short Fus
As Much as No One Else Wants

One Device to Rule Them All
Let Them Hate So Long As They Fear
NY Bangs
Hommage to No Content
Do It So I Can Really Feel The Music
On Neohistoricism
Pinching the Nerve
Not My Job
Gas Attach
No Fucks Were Given
Long Day of Sub Spotting
Dead Cousins and Priests We Don't
Dead Cousins and Priests We Don't Like
Redundant (Or) Next Level
Yankees of the Art Wo
Chemical Agents
Chemical Agents
Picnoleptics Quar
Bed Of Handles
Letting Subversion Happen
Money That I Get
Wood And Its Capabilities
Where Rocks Come From
Babe Wait
A 13 Year Old Poacher
Disputes Settled By Pistol
Haircut Bonanza
People Who Are My Son Now
Critical Bagels
Satchmo Ruby
kea's Last Stand
kea's Last St
Cabinet
Short Building Studio
Mayline: Muse or Nemesis?
Born Cheating: The Kun Wu Story
Understanding How to Whittle
Whittling and its Implications
Structural String
Narcitects
Big Salt
Late Nights \& Marb Lights
Billionaires With No Ideas
The Last Apprentice
Chinos: The Chinese Pants
A Haptic Memory
A Haptic Memory
Nylon Cargo Shorts
Mystic Orange
Mystic Orange
The Time is Now
Zoomed Out Mind
Modes Of Failure

To The Vector Go The Spoils
What If Carlo Scarpa Went To RISD In The 80s?
Strange Attractor
Center For Fringe Activities
For the Sake of the Dome
Politics of Flat Pack
Opinione'
Well On Desmond
Bridge Arena
Full Scale Partheon
Liquid Stee!
Ketchup on Architecture
Bat House
Bat House
Super Tight Envelope
Space and How They're Going There
21st Century Trash
Claptops
The Little Cucumber That Could
Ragging Bitch
Bio of a Think Tank
The Last Mile
Gravity, Fabric of Our Lives
Too Deformed to Fail
Paradigms-Esque
Be Your Own Cross
Wood Coate
Mind Meat
One Word Mutts: Sex Sells
Operation No-Mold
Operation Mylar Slap
Paralyzed From the Brain Up
Paralyzed From the B
Rouge Corbusians
Anointing the Uncritical
Inching Towards Criticality
Get Hedonistic
A Walking Zine Title
Xines
Mediocre Composers
Hejduk's Last Stand
Ping Pong Metrics
Orders IFound
Remapping Mom's Basement
Basic Savagery
Skate Away to Squabble Another Day
Born Bad, Raised Worse
Maybe That's What I care About
And Then We
And Then We Can Work
When Rem Does Mad Stupid Remixes With Unknown DJs
ICE-Olation

Too Have A Squiggle Addiction
Proportional Misadventures
Shanghai Prom
When It's Springtime Here Is It Spring In China?
Carlo Scarpa, AIA
Sons Of Smithtown, Italy
Fat Long Island Modernism
Consider It Twisted
Victorian Birthday Cake Remix
Swimming Buying Fucking
Re.Claimed Bulshit
Belorussian Boy Ban
A Quarter Inch Ce
Paving Plans: Where Do They Come From?
Towards A Good Architecture
Xander Wasn't Lying
Reading In The Wood Shop
Seminar Table Saw
Is Laser A Material?
Tree Rappers
Booty Crumbs
Weak Constitution
From (In) Finititude
Help growing on girffriend trees, we do not all have.
Donald Juan (Donald Won)
Two Inches Shy
Towards a Donjuanesque Architecture (Guest: J. Harley Nalley)
Architecture Is Not Funny
A World Filled With Architecture
Drafting Through the Table
Inside Outsiders
Exegetic 1 -Beams
Exegetic 1 -Beams
Louis Vuitton Dickscape
Tape Logic
Never Too Late For Criticality
The Proverbial Mold-Slapper
Bag Proper
nvoice Studio
Hazards of Consumption
This Old Thesis
A Terrific Undergrad
Poured in Place Banana Hammock
The D Factor
Insurgent Material Strategies
Gloucester's Pride
Fiaut Full of Pigeons
Fiat Full of Pigeons
Irrevocably Ronied
Tripping Over Sectional Properties
Sketchbook excerpt one ..... 3
Way-finding questionnaire ..... 11
Prosthesis № 01 ..... 21
Prosthesis $\mathrm{N}^{2} \mathrm{O}$ ..... 27
Sketchbook excerpt two ..... 29
Prosthesis № 03 ..... 45
Sketchbook excerpt three ..... 47
Prosthesis № 04 ..... 59
Sketchbook excerpt four ..... 61
Prosthesis № 05 ..... 73
Sketchbook excerpt five ..... 75
Bibliography ..... 93

## Just stop

thinking, worrying, looking over your
shoulder wondering, doubting, fearing,
shoulder wondering, doubting, fearing,
hurting, hoping for some easy way
out, struggling, grasping, confusing,
itching, scratching, mumbling, bumbling,
grumbling, humbling, stumbling, bumbling
rambling, grumbling, tumbling, stumbling
scrambling, hitching, hatching, bitching,
moaning, groaning, honing, boning,
horse-shitting, hair-splitting, nit-picking,
piss-trickling, nose sticking, ass-gouging
yeball-poking, finger pointing, alleyw
evil-eyeing, back-scratching, searching,
perching, besmirching, grinding, grinding
grinding away at yourself. Stop it and
just DO!

Sol LeWitt





## OVERCOME INERTIA

## What do you want most out of the thesis experience?

 Enrichment. I want to create a body of work and so too ideas, that 1 feel is compelling, has relevance, and is at least vaguely identified as a discourse of architectureWhat do you want to make?
I want to make emotional responses. I want to make things worthy of enthusiasm. I want to make things with humor and in earnest I want to make that which incites curiosity and is not passively engaged. It only really must be these things for me alone, usually For thesis I feel differently about that point. I want to make objects that function for my ends.

## Who is this for?

What I make may not be for anyone else. I will not presume that my work has significance for any individual beyond myself. I want to make without consideration for the desires of others. At this task, I am certain to fail. As a thesis it ought to be of some interest, of some use, to a greater discussion. I'll strive for.

## When does your work flow best?

Work is a rapid reciprocation between decision and action, but decisions are the thorny brambles that lust to ensnare. They are arguably the most important and most difficult. Decisions of any type require a certain measure of confidence. Swift paralysis is the only end in a complete void of it. To be effectual in self critique and to he reasons for any particular decision are sound. This assus , so be this ass o be concerned with the judgment of others; l'm not immune.

In this equation of decision and action, the latter is so rarely my ruin. From a sense of expertise or logical sequence, if eve especially narrow, confidence and thereby decision break loose blitzkrieg of action.

Work also flows exceedingly well during the exploration of a new tool or faculty, in the presence of curiosity

What would it take to design a project to enable that? Depending on the project, either sufficient education in the histories, precedents, and implications of a topic or a philosophic approach in which the compounding of logic and reasoning builds
 an argument that is stable in its own right. Of course these are not mutually exclusive. Additionally, it may be important to frame a problem in a way that maximizes freedom and/or seeks some means to further research and exploration.

Do you generally have too many or too few ideas for a project? I would say that I generally have a fair number of ideas, but they often get internally dismissed quickly. Sometime though, I find myself in a desert.

Are your project ideas usually more generative of new concepts, patterns, processes or responsive to existing places, institutions, technologies?
Responsive, I think.

Are your project ideas more about what you make or why you make it?
That's a difficult question. I'll dodge it. In honesty, it depends on the project. I've surely been more concerned with either side at varying times. I can say, with a heap of trepidation, that I'm more interested why something is made.

How do you judge your project ideas?
With severity. As they conform to the answers from question two. pay heed to my visceral responses.

Do you want to design a building, and why or why not Not particularly. In its intrinsic pragmatism, a building has certain responsibilities that I'm not as interested in pursuing with this hesis. Some of the critical, but still more routine architectural issues may detract from the types of conversations I strive to engage with.

Do you want your work to become an aesthetic artifact, unified in its own right, (as opposed to just being an intelligible set of documents), and why or why not?
I'm not satisfied with that which is not both beautiful and significant. I desire to make and refine things that have a visual significant. deste something visual like sothe that have a visua
 immediacy for the potential of more directed substance.

Do you want to make critical observations on society or culture and why or why not?
I do because I value that. It's both interesting and important.
Do you want to dig into scholarly research, and to continue writing all year, and why or why not?
I find that I'm more successful in creating ideas of substance through writing. It's an integral part of my thought process so I think that some amount of this will be crucial in my development over this year. However, I'm not quite as drawn to that as the place of culmination.

Do you have some other agenda beyond the above four, and if so, what is it?
'm compelled to build machines.
Now prioritize the above five.
$1,13,14,12,10$
Now picture yourself at the end of the process in May. What do you need most to have then to at least connect the top two of the bove priorities?
A cohesive relationship between artifact and argument communications visual and verbal.

What domain best describes those ambitions? (e.g. form-giving place response, building technology, cognition, sociology, activism, etc.)
Cognition.
What topics within that domain invite more consideration.
The ineffable. Perception. Emotion. Representation.

What is the most interesting claim you can make about any of those topics?
In decay the ineffable is inherent
What work can you propose to advance that claim? An object that juxtaposes purity and uniformity with the chaotic result of its decomposition. A piece of steel, easily specified and clearly describable, partially transformed into an entirely unique mess of tone and texture.

IN THE DARK



I'm searching for a more visceral link between myself and our collective prosthesis - the tools that shroud the frail body in unrivaled ability. These augmentations confer a certain power. The capacity to reveal or obscure, to change scales, mediate collective anatomy of machine and bone. They belong equally to the human and the apparatus, but are foreign to both. I'm searching for a way to draw, outward and inward.

PROSTHESIS



Drawing is a prosthesis for memory and
understanding. These drawing machines produce to both.
zero four
ink on paper
$14 \times 14$ inches
zero three
ink on paper
$14 \times 14$ inches
zero eigh
$1 \times 14$ inches
zero six
ink on paper
$14 \times 14$ inches

A dark wooden hood affixed to the wall by a hinged armature translates the movement of the blind operator inside by two methods. A direct mechanical connection through a series of pulleys moves one side of a pen gondola on the page. Accelerometer data from the hood is programmed to control a servo motor, which moves the other side of the pen


25


to to wall
three: detail of clamp pad with ball joint.

sketchbook excerpt two
$6 \times 85 / \mathrm{inches}$
one: head clamp concept sketch two: shoulder and heal
orientation to the wall
three: detail of clamp pad with ball joint.

THUR: $11: 00 \mathrm{Pm}$
FRI : 1:00 \& 2:00 PM


FIX ELLIPSE ARM
, $39^{\circ \%}, 165$ hanole

sketchbook excerpt two
graphite on pap
$6 \times 88^{5 / 8}$ inches
one: head clamp concept sketch.
two: shoulder and head clamp with
three: detail of clamp pad with ball joint.



With vectors merged and movement sporadic, the mediated output is obscured.

As machines are fundamentally geometric and predictable, the mediated output is revealed.


reference image for gaze recording:


PROSTHESIS
№ 03
Move, measure, draw, print

Materials:
aluminum, brass, steel, birch plywood, nylon webbing, wool elt, cotton fabric, upholstery foam.
Date:
01.27 .13





A device to record the gesture of the shoulder. It measures and inscribes the movement onto a sphere, true to shape.
joint detail
and embedded measurement.
sphere detail
printing process
unrolling the line inscribed on the sphere
to a plane through intaglio. a steady hand
rolling concentrically
next page:
shoulder geometry
graphite on pa
$19 \times 24$ inches
any sections measured and drafted
to recreate the surface geometry of the humeral head, acromion, and glenoid, novement and range.



[^1]the arm
pen on $p$
pen on paper
$36 \times 72$ inches
outward and inward limits, it's range and extents at full scale.

## gaze drawing

shoulder joint print
intaglio on rives bfk
$21 / 2 \times 2^{1 / 2}$

## spherical projection

graphite on paper
$19 \times 24$ inches
$19 \times 24$ inches
the line on the surface of the shoulder
joint drawing mechanism transposed onto a plane.


PROSTHESIS


## THE ULUSION OF 

OF WHMT? WHAT DOWS TIHS MENN?

SCALE - EASE - TOLIRANCE BGTUEON SCALES
TOLERENCE - EVE
TIME
STRUEELE - AUTHORSHIP
MY ROLE IN USE
WIAT ARE YOU TRYING TO SAY/N OT SAYING
FOUNO WNY TO MOVE THROVEH SCALES/TVRN CORNER, FATTEW SPEREK / PUSH BODY TO PICTURE PLANE THERE ARE WORDS THAT HAVENIT BEEN VTTERED,
THE FRAME


AS THE FULCRUM MOVES TO ONE ERTRGME, THE FORCE REQVIRED TO ACT ON THE LEVER APTROACHES INFINITY.
far before that the ulna breaks apart

one: concepts initiating the extension arm
two: testing geometries and function.
three: text of striking coincidence.


reach
video still depicting the elbow joint.
digital
reach
video still at full extension.
digital
reach
ink on paper
next page:
ascension in stasis


Arm extension drawing apparatus. Maximum reach of just over twelve feet. Its elbow joint allows for more varied and controlled movement. A pen is placed at the hand and at the outer limit of the structure. The duplication is not exact due to inherent distortion resulting from the device's geometry and the amplification of imprecision at the farthest extent.

lumber, plywood, steel,
monofilament, particle board cement, aluminum, wool felt, cotton webbing
Date:
05.05 .13


| sketchbook excerpt five | one: joint to register three dimensional | three: associations drawn between the |
| :--- | :--- | :--- |
| graphite on paper | movement. diagram of motion | eye, the joint, and projections beyond. |
| $6 \times 8 \frac{5}{8}$ inches | consolidation through string. |  |
|  | two: fulcrums changing scales of |  |
| movement. amplify or dampen. |  |  |



consolidation through string.
two: fulcrums changing scales of

one: joint to register three dimensional movement. diagram of motion consolidation through string. two: fulcrums changing scales of movement. amplify or dampen.



Be fastened, be unfettered. Be deliberate;
restraint is shifted, but conserved. Distance from the ground's stable equilibrium sets the body int chaos. The more narrowly removed the more harm is quickened.


 Whthem


$=1$
$=1$





## $i n k$ on paper $42 \times 48$ inches

ee movemen
ink on paper
$36 \times 48$ inches

```
42\times48 inches
```


# adar tower languishing since World War II, new projection 

 unfold. The body is perched high above, seated in the vacancy of the dome. Arms and legs are connected via cables and pulleys to the top of a 75 foot long steel rod. Its fulcrum sits just below . . . drawings are made, one at the top of the rod and one at the bottom. The top drawing is effectively a point. The bottom is the amplification and distortion reveeling the hidden complexityof the point.

With the body and machine, there is
 complete, shapes the wild outcome where great larity begets incredible obscurity.




Barney, Matthew, Hans-Ulrich Obrist, and Francis McKee. Matthew Barney: Drawing Restraint. Köln: Verlag Der Buchhandlung Walther König, 2005. Print.
Barthes, Roland, and Stephen Heath. "The Death of the Author." Image, Music, Text. New York: Hill and Wang, 1977. N. pag. Print.

Boon, Marcus. In Praise of Copying. Cambridge, MA: Harvard UP, 2010. Print.
Browning, Hugh C. The Principles of Architectural Drafting: A Sourcebook
of Techniques and Graphic Standards. New York: Whitney Library of
Design, 1996. Print.
Crary, Jonathan, Sanford Kwinter, and Georges Canguilhem. "Machine and Organism." Incorporations. New York, NY: Zone, 1992. 44-69. Print.

Eco, Umberto. The Open Work. Cambridge, MA: Harvard UP, 1989. Print.
Foucault, Michel. What Is an Author. N.p.: n.p., 1969. PDF
Frascari, Marco. Eleven Exercises in the Art of Architectural Drawing: Slow Food for the Architect's Imagination. London: Routledge, 2011. Print.

Kleist, Heinrich. "On The Marionette Theatre." The Drama Review 16.3 (1972): 22-26. Jstor.com. Web.

Lanier, Jaron. You Are Not a Gadget: A Manifesto. New York: Alfred A. Knopf, 2010. Print.
 Everyday Life. By Alice Yaeger. Kaplan and Kristin Ross. New Haven: Yale UP, 1987. N. pag. Print.

Mical, Thomas. "Introjection and Projection: Frederick Kiesler and His Dream Machine." Surrealism and Architecture. London: Routledge, 2005. N. pag. Prin.

Pichler, Walter. Walter Pichler, Works on Paper: October 26, 1988-January 22, 1989. [Washington, D.C.]: Hirshhorn Museum and Sculpture Garden, 1988. Print.

Scarry, Elaine. The Body in Pain: The Making and Unmaking of the World. New York: Oxford UP. 1985. Print.

Siersma, Betsy. Allan Wexler: Dining Rooms and Furniture for the Typical House. N.p.: n.p., 1989. Print.

Publications, 1990. Print
Unattributed. "Plan for Rational Improvements to the City of Paris." Potlacht. Bulletin of the Lettrist International. N.p., n.d. Web

Uddin, M. Saleh. Axonometric and Oblique Drawing: A 3-D Construction Rendering and Design Guide. New York: McGraw-Hill, 1997. Print.
Wexler, Allan, and Nancy Versaci. Allan Wexler: Small Buildings and Furniture exhibitionl Bell Gallery, Brown University, September 7-October 6, 1985 Fredman Gall ery Albright College, November 12-December 8, 1985 Providence?: S.n. 1985. Print.

Wexler, Allan, and Bernd Shulz. Allan Wexler. Barcelona: Gustavo Gil 1998. Print.
and Catherine Schelbert. Thinking Architecture. Basel: Birkhäuser, 2006. Print.

Zwikker, C. The Advanced Geometry of Plane Curves and Thei Applications: (Formerly Titled: Advanced Plane Geometry). New York Dover Publications, 1963. Print.


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