

# Mari X IKEA

autoprogettazione by greg.org



TAVOLETTE OCCORRENTI

SEZIONE	LUNGHEZZA	QUANTITÀ	SEZIONE	LUNGHEZZA	QUANTITÀ
A	2,5 x 20	200	F	2,5 x 5	36
B	2,5 x 5	130	G	"	39
C	"	80	H	"	28
D	"	70			
E	"	43			

1123 X F  
SCALA 1:5  
5/75  
TAVOLO RETTANGOLARE  
ENZO MARI PIAZZALE BARRACCA 10 20128 MILANO TELEFONO 4830851





EFFE Table, Enzo Mari, 1973, constructed from a kit of pre-cut pine lumber, sold as Metamobile by Simon International, Milano. [image: sothebys.com]

## Autoprogettazione: The Making Of An Enzo Mari Dining Room Table

posted by greg at November 11, 2007 10:42 PM

Autoprogettazione: The Making Of An Enzo Mari Dining Room Table

The economic and ecological and aesthetic far-sightedness of Enzo Mari's 1974 Autoprogettazione still blows my mind. Translated variously as "self-projects," and "self-design, self-made," Mari's collection of designs for furniture you could build yourself with just a hammer using cheap, off-the-shelf lumber anticipated several key design principles that resonate right now: DIY; sustainability; small-scale, local production and consumption; simplicity; handmade; hacking commercial products; and the open-source/creative commons movements [the furniture could be built by anyone except a factory or a dealer.]

Mari intended his Autoprogettazione to be made of #2 medium-grade, knotty pine, some of the humblest material on the market. He arranged for a company to pre-cut the lumber and sell it in packs as Metamobile. Naturally, one of these vintage 1974 kit tables sold for \$14,400 at auction last fall [http://www.architonic.com/4107675]

Naturally, a gallery in Chelsea, Demisch Danant [http://www.demischdanant.com/exhibitions/2007-09-27\_enzo-mari/], just closed an exhibition of Metamobile furniture which they had made, and which they arranged for Mari himself to sign. Which seems to defeat several purposes of the entire Autoprogettazione concept, but that's life.

I'm looking for photos of the first Metamobile furniture I saw, which is still my favorite: In 2004, Rirkrit Tiravanija produced Mari's square dining table [above] and some chairs in chrome-plated stainless steel. The pieces weighed a ton, but they were truly spectacular, like Koons picnic furniture.

Anyway, we're just in the middle of moving our place in DC, which gives me the occasion to need a bigger, nicer dining room table. Mid-century modernism is too relentlessly tasteful; re-

cent prices of "good" furniture make me laugh out loud.

Though I'm an unrepentant Ikea fan, it only goes so far [i.e., no serious furniture]. Mari's furniture feels like the perfect counterpoint to the homogeneous mega-catalogue stores: C&B,

Pottery Barn, CB2, West Elm, etc. etc. etc.

So I'm thinking of getting the Truss Table [top] known as the EFFE Table. As a city dweller, I'd have to have it made, or at least have the lumber cut and finished and delivered for my own assembly.

An ex-pat design firm in Japan used sugi, Japanese cedar, to make their EFFE table. [http://www.hesterfell.com/] For me, I think it's key to use Mari's intended pine. So far, I've sourced two wildly disparate, but potentially interesting woods:

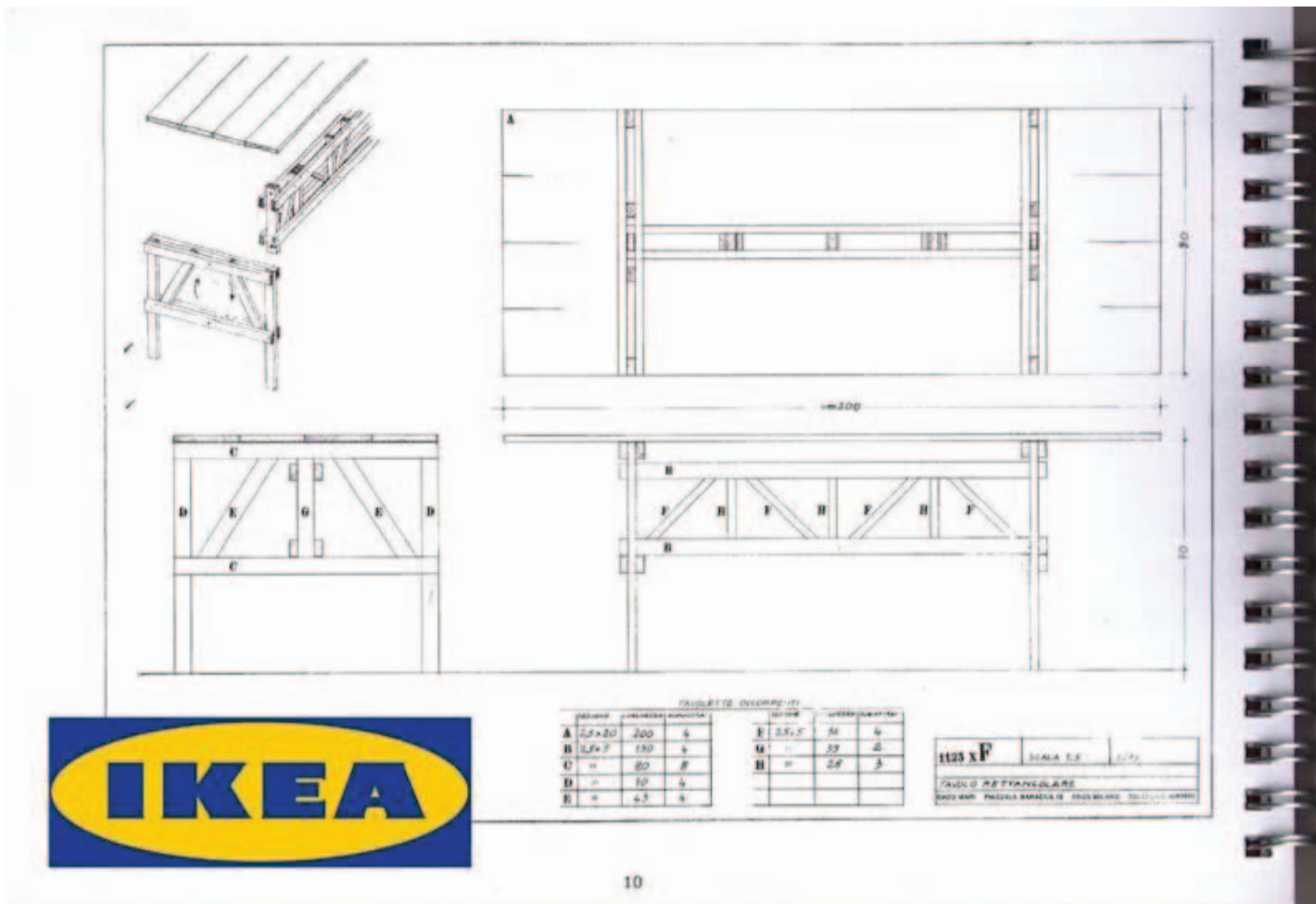
Though it sounds like an oxymoron, I tried to find the most unique, most refined pine around. In the US, at least, that's longleaf pine harvested from sunken logs. Known as sinker pine [http://www.hoganhardwoods.com/hogan/pages/technical/Technical\_01/sinker.htm] or river-reclaimed pine [http://www.heartpine.com/], these logs were up to 500 years old when they were felled 150-200 years ago. A few specialist mills salvage and process the wood, mostly into flooring. So producing the 1x2 "run of the mill" lumber needed would require custom milling. Which has an amusing irony to it. And a comfortably expensive price tag.

The other option is even more ironic, though: get the wood from Ikea. It'd be



Square Table, Enzo Mari, 1973, made from a kit of pre-cut pine lumber sold by Dino Gavina's Simon International. [image: phillipsdeputy.com]





Looking through the Ikea hacking communities, it seems no one had tried to make an Enzo Mari table from Ikea parts before. While Ikea publishes detailed dimensions for their assembled products, there's no information on part specs.

Over the course of several trips to Ikeas outside New York and Washington, DC, I identified every Ikea product that looked like a promising source of pine parts, and I measured each piece of wood.

Though there are many pine products at Ikea, there are just eight products or series [left] whose parts come close to standard 1-by lumber dimensions. I'll put them in the next post.

Then I'll calculate the various combinations to figure out things like the optimum use of material, the least amount of cutting, the cheapest/most expensive, the closest to Mari's design, and the most successful table. We'll see how it goes.

[http://greg.org/archive/2008/05/10/enzo\\_mari\\_x\\_ikea\\_mashup\\_ch\\_1.html](http://greg.org/archive/2008/05/10/enzo_mari_x_ikea_mashup_ch_1.html)

the ultimate Ikea hack to turn a mass-produced bookcase and bunkbed into a handmade, Italian designer dining table. Ikea could supplant Home Depot as the go-to source for Everything.

So far, though bunkbeds might work, the only Ikea products with promising dimensions and wood supply are bed slats. They're essentially a bundle of 1x2 boards stapled to a canvas tape. At \$9.99, they're cheaper per board-foot than actual lumber at Home Depot. Once I get my calculator warmed up, and then my tape measure, I'll know if an original Enzo Mari dining table can be had for \$19.98, \$998, or, \$14,998.

[http://greg.org/archive/2007/11/11/autoprogettazione\\_the\\_making\\_of\\_an\\_enzo\\_mari\\_dining\\_room\\_table.html](http://greg.org/archive/2007/11/11/autoprogettazione_the_making_of_an_enzo_mari_dining_room_table.html)

## Ch. 1: Mashup

posted by greg at May 10, 2008 11:50 PM

I wrote a few months ago about making a dining room table following Italian designer and theorist Enzo Mari's 1974 "Proposta per un'autoprogettazione," roughly translated as "A Project for self-design." Mari's goal was to effect a critical examination of the objects around us and the system of design, manufacture, distribution, marketing, and commerce that brings them into being.

He did this by developing blueprints for a houseful of furniture that could be made from standardized pine lumber, in a day or two. The designs require only the simplest saw cuts and a hammer. And if you get the lumberyard to cut the lengths for you, it just requires a hammer. As Mari explained in an interview:

"[T]hese items are not intended as alternatives to industrial ones, their creation is intended as a sort of critical exercise on design, and this is the reason why this experiment was called home design, not home production. The user, in repeating the operation, which can never be a slavish repetition...the designs have no measurements and while you are making them you can make changes, variations...when making the object the user becomes aware of the structural reasoning behind the object itself, therefore, subsequently he improves his own ability to assess the objects on the market with a more critical eye."

The EFFE table I want to build [above] requires two sizes of board: 1x2 inch pine for the structure, and 1x8 planks for the top. In 1983, Mari explained that, "As regards material, the easiest to acquire is undoubtedly still the wooden plank." Undoubtedly. So I headed down to the nearest hardware store, where there were several hundred varieties of curtain rod finials, but no lumber.

I was told I could order pine boards of these dimensions, and they'd come in about a week. Couldn't my contractor get wood for me? So I went to Home Depot, which had pine boards in several grades and dimensions. They were all from New Zealand.

First off, it wasn't that nice-looking, but buying processed wood from the other side of the world in a 100,000-sf store seemed to contradict the spirit of the autoprogettazione project.

Under those circumstances, Jeff Bezos' critical response to the furniture design industry made more sense. [When he started Amazon, he made the desks out of hollow-core doors and sawhorses, a scrappy tradition the company continued.] But I didn't want the aggressively cheap improvisation of a Bezos Table in my house.

The place where I saw the biggest piles of untreated pine lumber was, ironically, Ikea. The warehouse section near the store's exit has palletsful of bookcases, chairs and beds, all flat-packed and ready for assembly [home production?]

What would happen if you treat Ikea as your corner hardware store, and use their flatpack-optimized, mass-produced furniture components as the raw materials in an entirely different design?

## Ch. 2: Parts

posted by greg at June 8, 2008 4:40 PM

[In the early 1970's, Enzo Mari suggested using 1-by pine lumber to make his autoprogettazione furniture because it was cheap, standardized, easy to cut, and universally available at the corner hardware store. Now, my local hardware is a Home Depot, and the boards they sell come from New Zealand. So in keeping with the spirit of Mari's design, I'm going to use components from Ikea furniture kits instead.]

The dining table I'm going to make is called either F or EFFE, depending on which plans you look at [Mari's own autoprogettazione book uses the former; Peter Stamberg's 1976 blueprint anthology, "Instant Furniture," which reproduces four of Mari's



The 2002 reprint of "Autoprogettazione" from Corraini is much harder to find than it should be.

autoprogettazione designs, uses the latter.]

It calls for wood in two sizes. The truss and leg structure is made of 1x2 in lengths ranging from 10 1/2" to 51". The top calls for four 79-inch 1x8 planks, which actually comes to about 30" across. [After it's dried and finished, 1x8 boards are usually 3/4" x 7 1/2". I had no idea.]

There turns out to be far fewer useful sources of lumber in Ikea than I originally thought. [The idea hit me when I passed giant warehouse shelves filled with rolled up pine bed slats.] But most of the pine pieces in Ikea furniture are only 1/2-inch thick, too thin to use for underpinning a table.

Though I stuck to pine on principle, there is some solid wood furniture, mostly birch, and some oak. But by far, most of the wood-looking furniture is made from veneered particleboard; who knows what'd happen if you cut it?



Too thin: Ikea pine bed slats [image: ikea.com]

I don't doubt you could make a quintessentially Ikea Mari table by using only these kinds of components; the sleek, plastic-over-sawdust goodness of Ikea's signature Lack tables and shelves could make for a very conceptually tight mashup, but that'll be the second or third piece I'd make, not the first.

The other major constraint is the length of the boards for the top. Only three products have decent width pine boards within range of 79 inches [which is 200cm, if you're wondering why Mari picked that length]: The



Lack table [image: ikea.com]



Too notchy: Trofast storage system [image: ikea.com]

5/8-in. thick sides of the tallest Trofast storage units [above] are either 11 3/4 in. or 17 in. deep, but only 69 in. tall. And some of them have regularly spaced grooves for sliding bins.

[Though it felt like cheating, I did check out readymade tabletops. The Vika Furuskog tabletop comes in pine, and is 78 3/4 in. long, but only 23 5/8 in. wide; too narrow to use, too wide to double up on.]

The new Mandal bed [king-size, \$249] comes really close to being the perfect Mari table kit. It has a smoothly sealed headboard and footboard of solid pine, which, on the king size model, are each 78 in. long. The headboard is 23 1/2" wide, and the footboard is 12"; placed top-to-top, they'd be 35 1/2" wide, which isn't too far off. As a bonus, they both have tapers on the bottom edge, which would be nice on the underside of the tabletop. [There is also a row of



Ikea Mandal king-size bed [image: ikea.com]

pre-drilled holes along the base of each piece, though, which kind of bugs.]

Mari's table calls for more than 66 linear feet of 1x2 wood underneath. It's close, but the Mandal's inner support rails may provide enough wood without buying extra pieces.

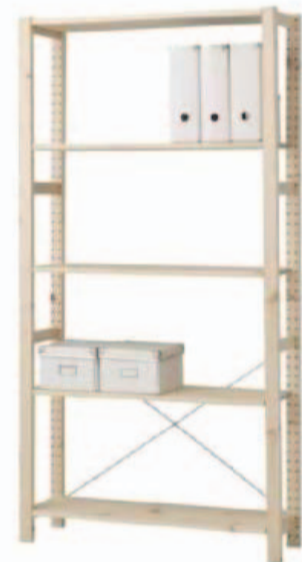
The siderails are smoothly finished, too, and each 78 in. piece is 3 in. wide on the outside face, tapering to 2 in. wide on the inside face. The unfinished pieces underneath the bed are either 7/8 x 1 3/4 in. [i.e., 1x2], or 1 3/4 square. Four 1 3/4 sq. pieces are 27 1/2 inches long, just 1/4-in. longer than the table leg specs.

If more wood is needed, a \$20, twin-sized Sultan Lade bed slat offers one of the best options for raw wood. The 15 slats are 2 3/4 x 3/4 x 38, with slightly beveled top corners.

The Mandal has the added benefit of being factory sealed with a smooth acrylic finish. If it's important to stick close to Mari's original idea of unfinished wood, the far-and-away winner is the Ivar storage system. Ivar's component-based, which means the shelves, side units, and corner posts may be all you need to make a table.

One pine top shelf [\$19] is 3/4 x 11 3/4 x 82 5/8 inches. Cut off the embedded metal brackets from each end, and it's right at 79 inches. There's also a vertical piece to cut off [or to not attach in the first place; the shelf I saw didn't have it at all.] If you use three shelves, the table will be 35 1/4 inches wide, which adds 5+ inches to the horizontal pieces underneath the table, too.

Corner posts are 1 3/4-in. square and filled with drilled holes [\$8, \$12]. The



Ivar shelving system [image: ikea.com]

side units are their own standard dimension--1 3/4 x 1 1/4 inches--which could be pulled apart and used as lumber. But it's also tempting to use the ladder-like pieces whole. Both parts come in 70 1/4" and 89" lengths [\$12, \$15].

Maybe you could cut down [sic] on the sawing required by just making the table to Ivar's dimensions instead of Mari's. Then instead of a lengthwise shelf, you could build a top from shorter 33 x 11 3/4-in. shelves [\$6] set crosswise.

I sit here trying to juggle the variables to the best effect: faithfulness to Mari's original design; faithfulness to his concept, which is not quite the same thing; the inherent "Ikea-ness" of the inputs; the quality and utility of the output; the amount of tweaking, finishing, and labor required.



And I repeatedly find myself creating a conceptual justification for the path of least resistance. All conceptual stunts being equal, I'm drawn toward the one that involves the least labor and mess. Which turns out not to be the same as requiring the least time, cost, or effort, as the 8-month over-analysis of making a simple table attests.

[http://greg.org/archive/2008/06/08/enzo\\_mari\\_x\\_ikea\\_mashup\\_ch\\_2\\_parts.html](http://greg.org/archive/2008/06/08/enzo_mari_x_ikea_mashup_ch_2_parts.html)

## Ch. 3: Decisions

posted by greg at April 17, 2009 12:02 PM

So I'm finally going to make my Enzo Mari autoprogettazione table from Ikea components. A publicist from Ford had offered a Flex station wagon for a road trip, and last weekend, I took them up on it. Which meant I could bring back the 89-in pieces of wood I'd scoped out. So I did. Next I will cut and finish the pieces. Then I will assemble the table.

[Background: Last summer, I wrote about wanting to make an Enzo Mari dining table out of 1-by pine lumber, which Mari chose in the early 1970's because it was the humblest, most ubiquitous, undesigned, standardized material around. It was manifesto furniture, a counter to both industrial-scale production and the fetishization of luxury design. Well, we all know who won that fight.

Instead of my original plan, which was to follow the letter of Mari's instructions, and find some insanely rare, beautiful pine lumber cut from 500-year-old trees that have been submerged on a riverbottom for 200 years, I decided to go with the spirit. The character-free pine lumber on every corner today is Ikea furniture. So I combed through Ikea's entire product line to find the individual components that were closest in dimensions and finish to Mari's original low-grade pine boards. The result: the Ivar shelving system .]

One of the key principles of Mari's autoprogettazione designs is that they required no complicated woodworking, just a minimal number of simple, straight cuts and some nails. As I was studying the Ikea parts and calculating the cuts and reworking necessary to

fit it to Mari's exact specifications, the process was becoming quite complex and forced, and I realized this entire point was being lost.

So I began seeing the Ikea lumber sui generis: it is not a source of raw material, it is the raw material. An Ikea Mari table would look like what it is, I figured. So I decided to adapt Mari's table's dimensions to the standardized dimensions of the Ivar components.

I'd heard from other folks who built an EFFE table that the 1x2 boards don't feel that sturdy for table legs. Most Ivar boards are even thinner, so I decided to use the thicker, square corner posts as legs. Rather than cut them down to boards and reassemble them as a 14-in. truss, I decided to leave the pre-assembled 12-in. Ivar sides intact, then double them up to use as trusses. All these minor changes in dimension and proportion rippled through Mari's original design, requiring almost every cut to be recalculated.

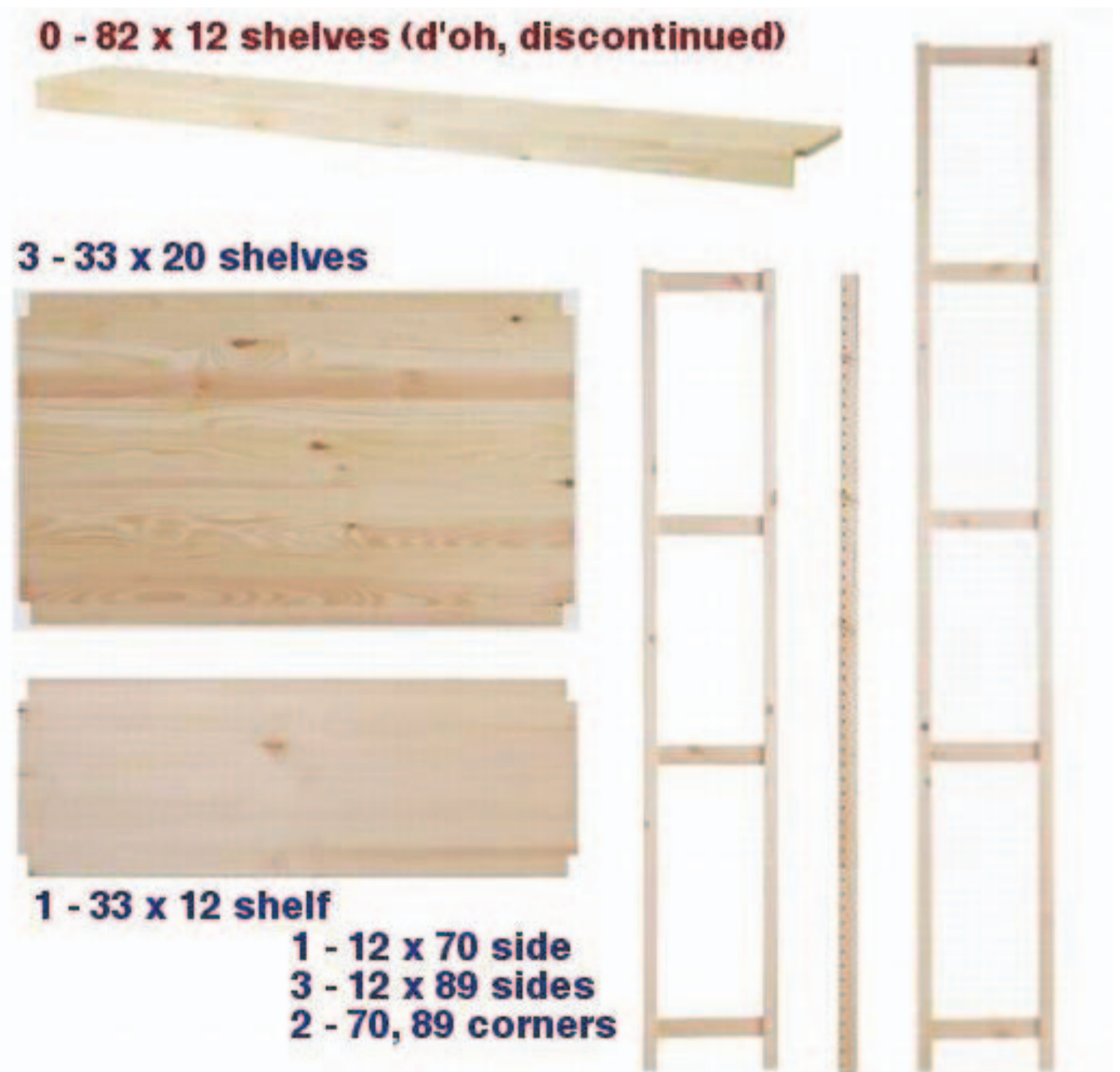
Conveniently, Mari's neat-but-arbitrary 200cm tabletop length was almost exactly the length of an 82-in. Ivar shelf with the metal bracket ends cut off. I'd just need three shelves to...whoops, in the intervening months since I began my calculatin', the shelves were discontinued. So on the fly, I ended up buying four 33-in. wide shelves, which I'll place width-wise to make a 72-in. long table. It's the opposite of Mari's long plank top, but it seems better than either a) scouring the country's Ikes for leftover shelf stock, or b) buying a finished tabletop, which Ikea merrily sells by the containerload.

But that means new proportions, new dimensions, and figuring out how to brace short, wide boards as opposed to long, thin ones. Which got me wondering about the table top's functionality and stability. Do I need to end glue the shelves together for strength? Or is that kind of more involved woodworking a betrayal of Mari's original knock-it-together concept? And what is the proper relationship between

conceptual awesomeness and shitty workmanship?

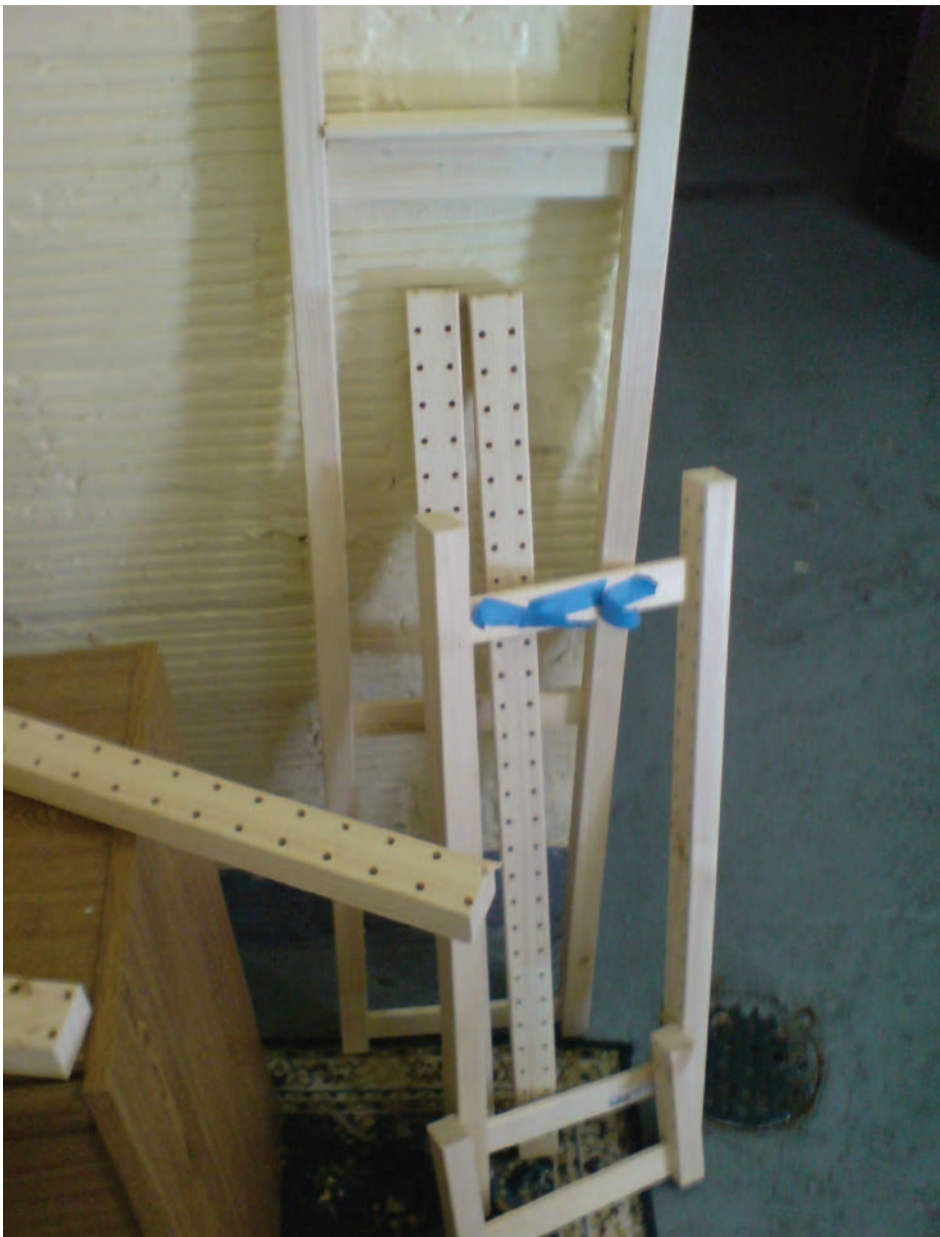
I know Mari's autoprogettazione was a critique of mass production and consumption, but is it a renunciation of craft, too? If a laborer is virtuous for hammering together his own furniture at home, is he somehow less virtuous if he puts a hand-rubbed, organic tung oil finish on it? As much as I embrace Mari's principles and the raw elegance of his design, as I look at my pile of low-grade pine shelving leaning against the wall, I confess, I'm having a hard time giving up my desire for a sweet, luxe patina. So while I could break out my awesome new Japanese saws and pound this table together in a day-- and I know it'd feel extremely Ikea if I did, and that's tight --I can't do it. I'm going to get all finish fetishy, and see if I can make this table beautiful as well as cool. We'll see.

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Required Ivar shelving components [images: ikea.com]





Two Ivar shelf sides cut to length form the table's center truss. Two more are cut down for the horizontal pieces of the table ends. [image: greg.org]

## Ch. 4: Finish Fetish

posted by greg at April 25, 2009 12:17 AM

For the 2002 reissue of his 1974 catalogue, "PROPOSTA PER UN' AUTOPROGETTAZIONE," Enzo

Mari added "a few technical hints." I love them, especially the quotation marks, even as I prepare to ignore them a little and end up with something less "belle" than it could be:

"...Then, from a purely formal (symbolic) and 'instructive' point of view, table tops are 'attractive' ['belle'] if they are made by putting several small



My father-in-law gave me these awesome nokogiri Japanese saws. The Ivar side trusses are glued and stapled together. I worried about hitting a staple with the saw, but they were avoidable or removable. [image: greg.org]



Nokogiri: cutting flush with a Japanese joinery saw. [image: greg.org]

planks together. From a strictly utilitarian point of view you can use plywood or chipboard.

"For the same reasons the constructions are 'attractive' if they are left rough, with the saw marks, neither planed nor varnished."

I found this slightly obsessive discussion of finishing solid pine furniture [<http://www.sankei.ws/pine.html>] to be quite helpful, if a little daunting. But already, it saved me from myself and helped me lift my wood finishing sights beyond the lying corporate shelves of Ace Hardware:

"First, however, a warning is needed: there is zero 'truth in advertising' in the finish industry. Absolutely anything can contain absolutely anything, no matter what the label says. There are products out there labeled tung oil

that don't have any tung oil whatsoever in them. Many 'tung oil' products depend mostly on phenolic resins. You have to buy from a source that is expert enough to know precisely what is in their products and trustworthy enough to tell you. In Canada, that's Lee Valley, in the USA, Sutherland Welles [<http://www.sutherlandwelles.com/>]."

Sounds good to me.

Sure enough, the extremely helpful folks at Sutherland and Welles guided me toward the right product for the project, a table with a top that will see regular use. I expect I'll have enough polymerized tung oil varnish and sealer to give the table a good five coats, if not the 10-12 that Sankey prefers.

Meanwhile, I mapped out each piece to be cut onto the Ivar shelf components



Cheat: I glued up four Ivar shelves for the top. I went to a wood shop so I could use big clamps, and I happily used a table saw to remove the shelf brackets. Since I couldn't fit the full top in my car, I made two asymmetrical leaves. I joined them with perpendicular braces underneath, as the tabletop does not rest on the center truss. Mari also added braces to his original design for the Metamobile kits. [image: greg.org]





Sutherland Welles Tung Oil Varnish [image: greg.org]

with blue tape. I plan to cut everything to length, finish the parts while I can reach all the corners, and then assemble the table. And then give it a last coat or two for good measure.

The wood cost \$120, the tung oil, \$82.

[http://greg.org/archive/2009/04/25/enzo\\_mari\\_x\\_ikea\\_mashup\\_ch\\_4\\_finish\\_fetish.html](http://greg.org/archive/2009/04/25/enzo_mari_x_ikea_mashup_ch_4_finish_fetish.html)

## Ch. 5: In Process [Rev.]

posted by greg at May 23, 2009 2:07 PM

An update on the Enzo Mari x Ikea autoprogettazione table project:

I just finished putting on the second coat of varnish sealer, and now everything's drying and curing in the

basement. The picture above was how the wood sat for a week between the first coat and this morning, stacked on our radiator [I moved it up after about 24 hours when it wasn't quite cured, and then my schedule got away from me for the week.]

I'm sure it's toxic and flammable and what not, but the tung oil varnish is a real, easy pleasure to work with. Goes on and off really nicely. Anyone who's made something from wood probably knows this already, but the gradual surface and finish improvements brought on by each step of the sand-vacuum-tack-apply-sit-wipe-dry-cure cycle are fascinating to see. And you start to realize how most modern furniture is really just an industrialized approximation of what is only rarely done by hand. It's like living in a world of Miracle Whip and never knowing there's a thing called mayonnaise.

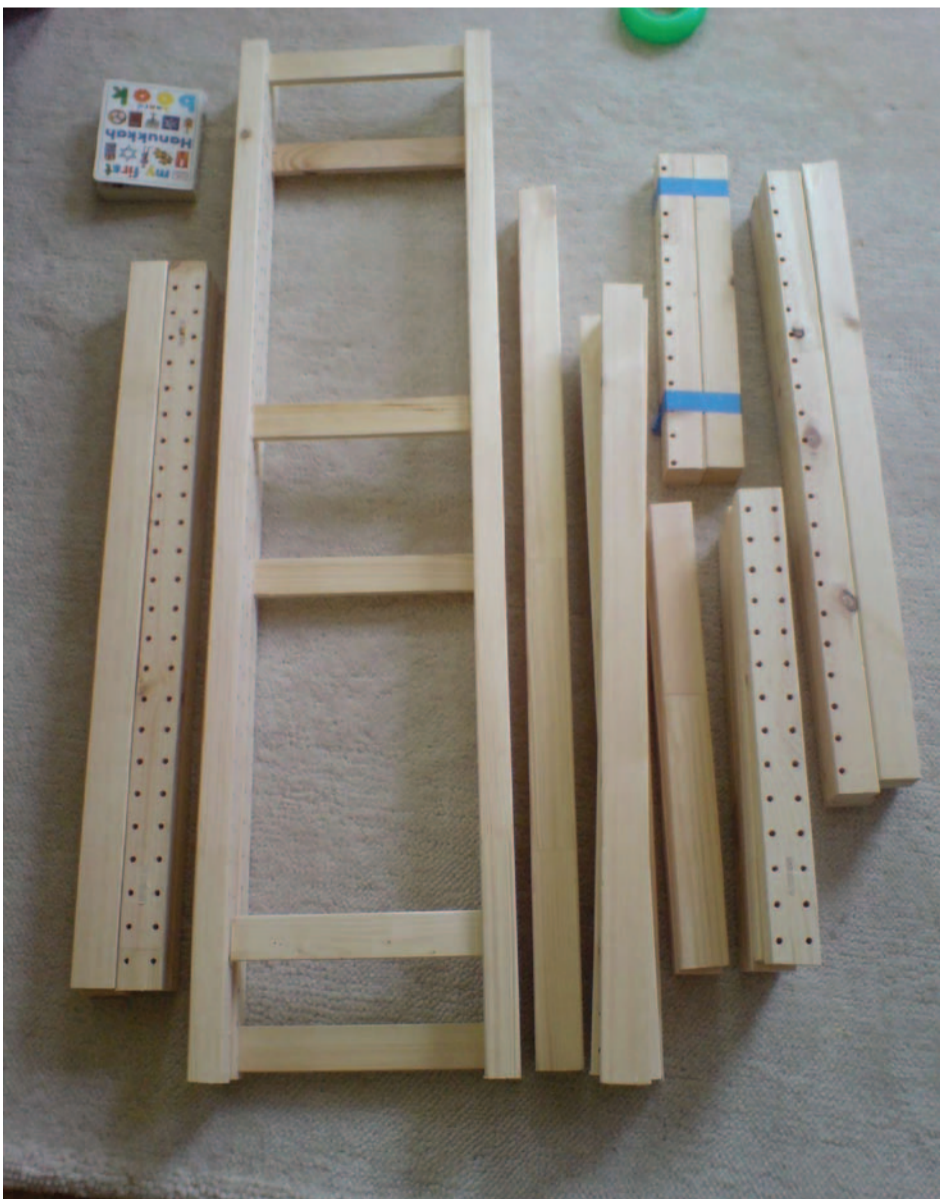
Another couple of observations: Ikea's wood is really crappy, but some wood is much crappier than others. The Ivar corner posts feel denser and stronger than the sides, for example, and make me glad I decided to use them for the table legs. All these long pieces of wood are engineered, made up of

several short pieces, spliced together. The shelves are the crappiest of all, all glued up strips of varying quality, which made it really hard to find relatively clear, relatively straight pieces.

Mari's original instructions for the autoprogettazione furniture was to leave it completely unfinished and unsanded. And that would have taken a hell of a lot less time, work, and money. I expect the majority of buyers of Ikea's unfinished Ivar shelving system leave it as is, too, opting for cheapness and speed over a finish they just don't care about. Which means that assuming they don't think it's "wasted" completely, to most people, all the extra effort to finish what is really low-grade wood will be unappreciated, uninteresting, unwanted, or unnoticed. It's better than lipstick on a pig, but it's pointed in that direction.

Some changes mid-course to the design:

I don't know how I missed this during the months of calculating, recalculating, staring, checking, and shopping, but 1 3/4 inches is not the same as 1 5/8 inches. It's 1/8 of an inch different. Can you believe that?



Parts cut and ready for pre-assembly finishing [image: greg.org]



Tung oil varnish curing after 2nd coat. [image: greg.org]





Revised-on-the-fly measurements [image: christies.com]

This revelation only occurred to me when I started piecing the trusses together, just to see how they'd go. All the diagonals above were originally made from the ladder-shaped, 1 3/4-in. bookcase sides, while the legs and the verticals were from the square, 1 5/8-in corner posts. But the diagonals, then, were too wide, and the trusses wouldn't lay flat. The diagram above shows which pieces need to be square

corner wood, and which need to be side wood.

The only solution was to head off to Ikea and buy enough corner post [6x18 inches, basically] to make all the diagonals. This altered the minimum/optimum number of Ivar parts that are required to build the table: basically, you could get two shorter sides and

two taller sides, and then three long corners. Here's the revised parts list:

The new parts total cost: Ivar shelf sides [2 x \$15, 2 x \$20 = \$70]; Ivar corner posts [3 x \$15 = \$45]; Ivar shelves [3 x \$15, 1 x \$7.50 = \$52.50]; subtotal: \$167.50.

Finish: Tung oil varnish [2 pints, \$85 or so]; sandpaper [12 sheets, \$8]; tack cloth [\$4]; latex gloves [\$4]; subtotal: \$101.

Assembly: Nails [\$5]; Wood glue [\$4]; clamps [\$16]; subtotal: \$25.

So right now, we're looking at \$293.50, more expensive than all but a couple of the comparably sized dining tables at Ikea, and almost the exact same price [\$299] as the Forsby, made from finished solid pine. In the years since 1974, when Mari and Ikea both launched concepts for low-cost design for the everyman, it appears Ikea has lapped autoprogettazione more than a few times.

[http://greg.org/archive/2009/05/23/enzo\\_mari\\_x\\_ikea\\_mashup\\_ch\\_5\\_in\\_process\\_rev.html](http://greg.org/archive/2009/05/23/enzo_mari_x_ikea_mashup_ch_5_in_process_rev.html)

## Ch. 5.5: Being Mashed Up

posted by greg at June 29, 2009 10:05 AM

I realized I'd been putting off the actual assembly of my Enzo Mari table, daunted by the impending exactitude and fearful of the commitment of actually screwing all the pieces together.

Which seems to fly in the face of Mari's original "just hammer it together" intentions for the autoprogettazione series.

I knew that without jigs and a flat surface and proper squaring equipment and such, I was invariably going to misdrill something, and then I'd be trying to redrill holes 1/8th of an inch to the left somewhere, and--

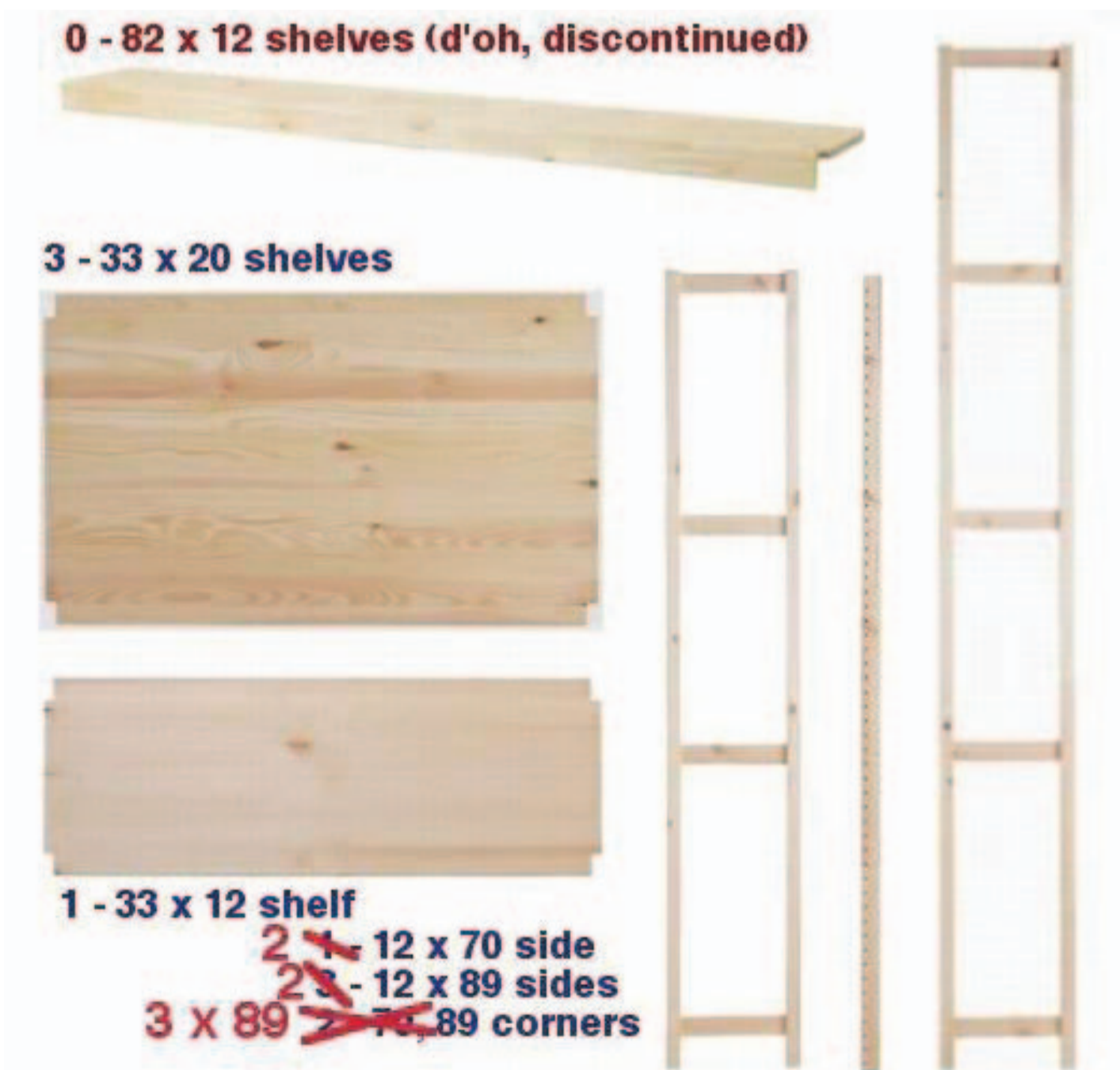
The joint that really made me nervous was the first one I'd have to do, drilling a 5/16" hold through the center of all the side truss pieces [right about where the knot is in this photo] AND through the ends of the center truss, so that I could thread a carriage bolt through, and hold the entire table together properly. Forever.

Rather than risk screwing this up, I decided to piece each truss together with a steel bookend, and then hammer and wood glue enough joints to hold it. Then I'll drill and screw the major joints after it's together.

I hadn't thought of how much those simple wingnuts changed the nature of the autoprogettazione concept. They're the difference between project and product.

The Metamobile kits weren't just pre-cut wood; they were also predrilled. And that required the construction of jigs, the use of some workshop- or factory-grade hardware, and probably even an assembly line, or at least some batch work. In other words, they were exactly what the autoprogettazione series was supposed to not be: mass produced.

Furniture sold as a kid of parts that comes ready to assemble, with just one tool, just follow the slightly baffling instruction diagrams exactly, and voila!



Revised Ivar components list [images: ikea.com]





Test assembly of the table's three structural elements, originally for marking bolt holes. That clamp is holding together a split repair which I made with my first nail. [image: greg.org]

Sound familiar? Enzo Mari beat me to an Ikea mashup by about 35 years.

Related:

14 June 2000, Lot 103: ENZO MARI, A PINE DINING TABLE "designed 1973, manufactured by Simon International for the Metamobile Series, the square slatted top on open understructure secured by wing-nuts", sold for £5,875. [christies.com]

Dec 15, 2006, Lot 2: ENZO MARI, AN EXTREMELY RARE "EFFE" TABLE "Manufactured by Simon International, ca. 1974. from the Metamobile

series...Acquired directly from Dino Gavina, c. 1975," sold for \$14,400 [so-thebys.com]

[http://greg.org/archive/2009/06/29/enzo\\_mari\\_x\\_ikea\\_mashup\\_being\\_mashed\\_up.html](http://greg.org/archive/2009/06/29/enzo_mari_x_ikea_mashup_being_mashed_up.html)

## Ch. 5.6: Assembly Notes

[originally posted by greg as captions on flickr photos, June 27, 2009]

After weeks of rather tedious but satisfying parts finishing, I finally started assembling the trusses for the table. I realized I was a bit hesitant to commit to nailing or screwing the pieces together. It'd make holes in the wood, and there's no [easy] turning back.

Also, I was kind of lazy, not wanting to schlep back and forth to the basement with all these pieces, and all the drills and Dremels and tarps and stuff. But I finally took the leap, rolled the carpet in the living room back, and just start to work.

Sure enough, the first nail I put in popped out of the piece below at a weird angle, and I had to hammer it out and redo it. [And glue and clamp the split piece underneath, which won't be visible anyway, because it ended up on the inside of a truss.] Sometimes, the nail will hit a pre-drilled hole, and it'll just sink through.

I was worried for a while about which way I should turn each piece. If I turned too many pieces with the holes facing inward, would the table lose some of its eventual Ikeanness?

Turns out I didn't need to worry; the holey, prefab, repurposed nature of the wood comes shining through from multiple angles.

One thing I found, though, is that knots near the end of a piece of wood can screw you. Because the surrounding wood was so soft, the angle of one particularly gnarly knot kept deflecting my nails. I finally gave up, glued it, and left it for the drill&screw phase.

Next time, though, I'd watch when I cut the pieces, so that knots--or Ikea's toothy zigzag joints--don't end up near the ends.

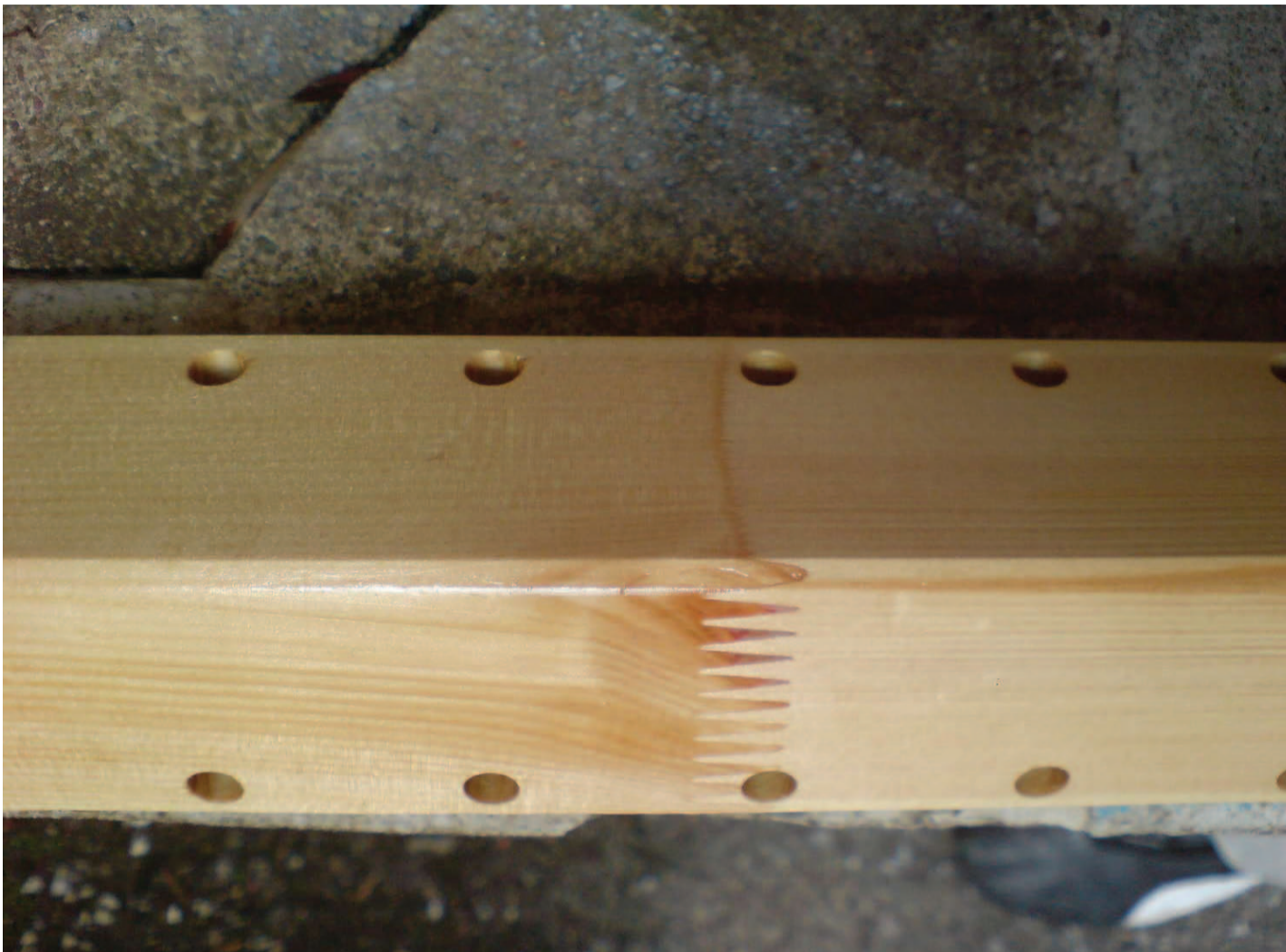
When the three pieces were done, I test assembled them. The center truss pivots and slots into place in the two side trusses, and two giant carriage bolts with wingnuts will eventually hold that center post [with the X] in place.



Square Table, Enzo Mari, 1973, Metamobile kit of pre-cut [and pre-drilled] lumber assembled with both nails and bolts & wing nuts. [image: christies.com]







Ikeanness: Ivar shelf corner post, with scarf joint [image: greg.org]

[That's how the original precut wood kits from Simon Int'l's Metamobile series were put together.]

What is obvious, but I didn't think of beforehand, is that the center truss needs room to pivot. I'd kind of assumed the side truss diagonals could be freehanded in, and that their angle and distance from the center didn't really matter. But if they're too close--as they almost are on one of my trusses--they might not give enough radius for the center truss, and you'll have to rubber mallet it into place. [And then back out, since you're not done. And by you, I mean me.]

These assembled trusses will all get 2-3 additional coats of tung oil varnish before the table comes together. The top will get 4-5.

<http://www.flickr.com/photos/gregorg/3671030083>

## Ch. 6: Ikeanness

posted by greg at June 7, 2009 11:00 PM

The tile in the guest bathroom in North Carolina was handmade and sun-dried in Mexico, as you can tell by the single

square with the artful flaw, a footprint from a wandering dog.

Woodworking aficionados get off on things like grain patterns and joinery, the more intricate the better. So it's at once surprising and totally not that

after spending so much time finishing this wood, I'm starting to dig its industrial qualities, its intrinsic Ikeanness.

Ikea's IVAR shelving system is made from unfinished pine, but that's barely half the story. When you start looking

closely, you see that even the simplest board is actually made up of several pieces of wood, spliced together.

It's never the same, either. Each identical-seeming 72-in. post is unique. It's almost like they piece all these scraps together with this insane, zig-zag scarf joint, into a single, endless piece of wood, which gets extruded, drilled, and cut to length on the other end.

Once you notice these joints--this one is the highest-contrast of the whole pile--your eyes are drawn to them, like learning a new word and suddenly hearing it everywhere.

The shelves are glued up from pine strips, that's obvious. But was I really so focused on selecting the "right" color ranges that I didn't notice this string of lozenge-shaped plugs which filled a massive gap in one of the shelves? I think that will be the table's dog footprint.

[http://greg.org/archive/2009/06/07/enzo\\_mari\\_x\\_ikea\\_mashup\\_ch\\_6\\_ikeanness.html](http://greg.org/archive/2009/06/07/enzo_mari_x_ikea_mashup_ch_6_ikeanness.html)

## Ch. Last

posted by greg at November 24, 2009 11:28 AM

A quick recap:



Ikeanness 2: Patch-on-patch automated repairs [image: greg.org]





Done. November 24, 2009 [image: greg.org]

An EFFE table based on a 1974 design by Enzo Mari, but made entirely from unfinished pine components of Ikea's Ivar shelving system. The vertical and diagonal elements are the square corner posts. [Some revisions were made mid-construction.] Horizontal elements are the pre-assembled shelving

side trusses. [The center truss uses two trusses intact, while the end trusses use disassembled pieces.] The top is glued up from four Ivar shelves, which are braced underneath. [compare to Mari's original design below.]

Though Enzo Mari's original design calls for the low-grade pine to remain untreated, I decided to finish the entire thing with Sutherland Welles tung oil varnish. Components received five coats of wiping varnish, with sanding in between, before the trusses were constructed [finishing nails and #10 stainless screws]. The trusses and top then received six more coats of medium lustre varnish. The top will get two more, then a final sanding with steel wool.

Not only did the varnish cost more than the wood, all this hand-finishing turns out to be an insane amount of time and effort. Even so, the incredibly uneven quality of the Ikea pine resists a fine finish. This top may be conceptually ideal, but a more practical solution may be required if we decide to use the table daily.

[http://greg.org/archive/2009/11/24/enzo\\_mari\\_x\\_ikea\\_mashup\\_ch\\_last.html](http://greg.org/archive/2009/11/24/enzo_mari_x_ikea_mashup_ch_last.html)

## Related: Enzo Mari X Rirkrit Tiravanija

posted by greg at April 25, 2009 5:01 PM

As I've said before, the first Enzo Mari autoprogettazione furniture I ever saw was by Rirkrit Tiravanija. He had tables and chairs fabricated from polished stainless steel, which his gallery from Mexico City, kurimanzutto, showed at Basel and a couple of other fairs a few years ago.

They weighed a ton and cost a fortune--as furniture, anyway; as sculpture, they seemed like a bargain--but they looked spectacular.

Rirkrit hit a zone in his work then where he was re-creating various examples of modernistic furniture and architecture in mirrored stainless steel;



Mari's book contains labels to be used for completed projections. [image: greg.org]





Untitled (Autoprogettazione, 1123 xE/1123 xR), Rirkrit Tiravanija, 2004 [image: kurimanzutto]



Just building 32 Enzo Mari tables [image: peter nencini]

there was a ping pong table ; several corner assemblages using three Smithsonian-esque, non-site mirrors; and an entire chrome pavilion in Bilbao. The effect was to simultaneously aestheticize the original and dematerialize the substantial object on display, turn them into non-objects. Which is kind of ironic, since they're among the most atypically beautiful works the supposedly non-object-oriented [heh] artist has made.

[http://greg.org/archive/2009/04/25/enzo\\_mari\\_x\\_rirkrit\\_tiravanija.html](http://greg.org/archive/2009/04/25/enzo_mari_x_rirkrit_tiravanija.html)

## Autoprogettazione Updates From All Over

posted by greg at October 28, 2009 1:21 PM

Autoprogettazione Updates From All Over

Sheesh, as if I wasn't painfully aware of the nearly finished Enzo Mari x Ikea Mashup table sitting behind my sofa, I get this, from Peter Nencini [<http://peter-nencini.blogspot.com/2009/10/joint-effort.html>], which frankly just hurts:

"A couple of weeks ago we reassembled 32 studio tables, originally built last year to Enzo Mari's Autoprogettazione plans, published in 1974."

I'll assume that they're not putting twelve coats of hand-rubbed tung oil on theirs. At least I can hope my next 31 tables will go much more quickly.

Then there's Wallpaper magazine [<http://www.wallpaper.com/gallery/interiors/autoprogettazione-revisited-at-the-aa-london/17051392/21803>] swooping in with "Autoprogettazione Revisited" at the Architecture Association in London, where AA students and a few name designers show off their Mari-inspired hacks, and there's even a lecture by Mari himself, which is alternately animated and tedious, and thanks to the on-the-fly translation, twice as long as it would normally be.

But even as I worry a bit about missing a trend--or worse, finding myself caught up in one--I'm reading the AA's catalogue and instructions for the show --because yeah, I'd totally make Kueng-Caputo's awesome lamp [<http://www.kueng-caputo.ch>], wouldn't you?--and I find this:

"Mari was ultimately disappointed with the original response to Autoprogettazione, believing that 'only a very

few 1 or 2% understood the meaning of the experiment' ...Enzo Mari hoped that the idea of Autoprogettazione would last into the future. Autoprogettazione Revisited reveals that it has done just that. Not all of the artist/designer responses in Autoprogettazione Revisited can be duplicated by the enthusiast, but they are inspirational and without a doubt follow the Mari principle that 'by thinking with your own hands, by [making] our own thoughts you make them clearer.'" [[http://www.aaschool.ac.uk/Downloads/Autoprogettazione\\_Revisited\\_instructions\\_web.pdf](http://www.aaschool.ac.uk/Downloads/Autoprogettazione_Revisited_instructions_web.pdf)]

I've always understood Mari's project to be a critique of the self-important distinction between the "artist/designer" and the "enthusiast." In his lecture, Mari actually said that of the many thousands of requests for Autoprogettazione plans, only 1-2% of them were from design professionals. I can totally imagine the head of an architecture school gallery thinking

that those two tiny, so-enlightened populations are the same, but I'm not at all sure Mari would agree with her.



la lampada a stelo, Kueng-Caputo, 09.2009 [image: aaschool.ac.uk]

[thanks andy for the links.]

[http://greg.org/archive/2009/10/28/autoprogettazione\\_updates\\_from\\_all\\_over.html](http://greg.org/archive/2009/10/28/autoprogettazione_updates_from_all_over.html)

## Credits

Enzo Mari X IKEA is an anthology of posts from greg.org: the making of. It is published in a limited edition.

The Enzo Mari X IKEA table, 2007-9, is the first in a series.

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Lot 73, Enzo Mari PROPOSTA PER UN'AUTOPROGETTAZIONE Milan, Galleria Milano, 1974. Cat. in-16 à l'italienne, Vendu EUR 497 [artcurial.com]