Make this chair.

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Each of us have to find a way to survive until tomorrow, and the next day, and the day after. You and I continually need to eat, drink, sleep, think, and earn a living. Every one of the countless actions you perform — evidently everything you do — is done by yourself, yet only some things you do are called do-it-yourself. Words used to describe ordinary acts of being human, of doing, are evoked in the exclusionary language of DIY to describe extraordinary individual actions — a do-it-yourself act is not only an act done by yourself, it is an act done by no other entity but yourself. But this language does not often describe actions pushing the limits of human ability, instead it is generally reserved for relatively unpopular and often tedious activities, like making a chair.

If you need a chair, I have provided all of the information you need to make this one, though I wonder why you might be compelled to do so. These days, manufactured chairs are often readily available and relatively affordable, and the impetus for making anything by yourself seems unlikely to exist as long as you can afford not to. But before you make this chair, and certainly before you decide not to, it's worth considering if this logic of affordability and availability in fact determines DIY participation, what contexts produce do-it-yourself practices, and what the difference really is between doing it and doing-it-yourself.

The respective words do, it, and yourself have been in the common English vocabulary for centuries, though their conjunctive use as do-it-yourself is rather new. Etymology points us to the do-it-yourselfer who emerged around the beginning of the 20th century, referring to those who take part in repair and improvement work around the house. By the 1950s, the word do-it-yourself and its acronym DIY were commonplace in popular Western culture to describe a variety of hobbies and hobby culture itself. Bricolage, a marginally more interesting synonym of do-it-yourself, is a French

word born in the 1960s, which places a particular emphasis on the materials involved in DIY production. It means "work made from a diverse range of available things," and is derived from the verb bricoler, meaning "to putter about."[1]

We now define do-it-yourself broadly as "an activity in which one does something oneself or on one's own initiative," and specifically as "the activity of doing or making something (as in woodworking or home repair) without professional training or assistance."[2] You'll notice that the concern for an individual's sense of agency is embedded in the definition. Not only is agency a key component of the word's definition, but it is a fundamental issue of the era in which the word was born.

The "initiative" of do-it-yourselfers may have emerged in response to a dramatic decrease in self-employment, and the limited control of one's work that employment produced, amid the 19th century industrialization of the West. Steven Gelber suggests that this response was a primarily masculine one, at least at first; "Do-it-yourself can be thought of as a reassertion of traditional direct male control of the physical environment through the use of heavy tools in a way that evoked pre-industrial manual competence."[3] While this gendered use of the term remains a primary way of identifying do-it-yourselfers and defining DIY activities, the term's application began expanding quite dramatically in the 1960s, describing a variety of activities commonly practiced as a tool for countercultural and anti-capitalist activism. For the self-sufficient, anti-consumerist, and anti-establishment punks of the 1970s, DIY activities naturally served as the primary means of cultural production, showing up in everything from clothing making, to music recording and zine printing. Similarly, many archetypal manifestations of 1960s hippie culture — from tie dye t-shirts, to free presses and rural living communes — employed DIY methods.

Unique to the Soviet state, was the active promotion of DIY throughout its history, by way of various widely distributed publications containing technical information for its application both in the workplace and at home. Though probably not intended or encouraged by the state, use of technical knowledge in a kind of "repair culture" emerged during the modernization of the Khrushchev era, where manufactured goods were often essentially unusable without some sort of repair or adjustment. For example, families would move into newly completed social housing that lacked a bathtub, or even plumbing, and residents would have to work to make the building habitable.[4] In cases such as these, waiting for the state to complete what it had failed to deliver would often prove to be futile. Though the solutions achieved by individuals and communities in these instances often reflected the functional and decorative aspirations of Khrushchev era modernization project, the necessary input on the part of the residents represented a reaction to the incomplete transformation of modernization.

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1 "Bricolage," Merriam-Webster, Inc., accessed November 12, 2019, https://www.merriam-webster.com/dictionary/bricolage#note-1.

2 "do-it-yourself," Merriam-Webster, Inc., accessed November 12, 2019, https://www.merriam-webster.com/dictionary/do-it-yourself.

3 Steven Gelber, "Do-It-Yourself: Constructing, Repairing and Maintaining Domestic Masculinity," *American Quarterly* 49, no. 1 (1997): 66-112.

4 Susan Reid, "Makeshift Modernity: DIY, Craft and the Virtuous Homemaker in New Soviet Housing of the 1960s," *International Journal for History, Culture and Modernity* 87, no. 2 (2014).

Putting the raison d'être of do-it-yourself rather simply, at the beginning of the 20th century popular culture sought a linguistic distinction between an activity done for oneself by oneself and an activity done for oneself by someone or something else. The term is our label for all of the actions that modern modes of production and distribution have rarified — categorized generally as making, moving and repairing — and we revived these obsolete activities as artifacts of pre-industrial society. Because this simple term describes what we used to do, and are now doing again, it bears no meaning regarding activities that individuals within a society have always done. For this reason — to illustrate with a couple of examples — it would be absurd for the history of 16th Century Native American dwellings to be written in terms of DIY, or for the history of 20th Century hippie commune structures to ignore DIY's cultural influence on the commune's building practices.

However it developed, in the West or in the East or elsewhere, DIY seems to have assumed an oppositional position to the conditions of modernity, representing self-sufficient alternatives or solutions to problems that arise from the forceful development of our material and social environments in modernity. That is to say, DIY's hobbyist roots in the United States do not place it at odds with the bricolage and repair-oriented manifestation of DIY in the Soviet Union, or with punk culture's anti-capitalist and self-sufficient use of DIY in the 1970s, in the sense that all employ DIY as a mode of resilience. To further support this assertion, it's worth mentioning that DIY was not the first and is certainly not the only individual-oriented reaction to the industrial transformation of society. In fact, we can find many analogous characteristics of DIY culture represented in the early formulations of anarchism of the 1840s, near the close of the First Industrial Revolution and quite a while before the arrival of the do-it-yourselfer. Discourse on anarchism at that time — a diverse collection of social and political theories that generally seemed to agree on anti-authoritarianism and the rejection of hierarchies in social organization — naturally rejected the servitude of the worker to the employer and the power inherent in capital development. An early flavor of anarchism, individualist anarchism, placed a particularly strong value on an individual's right to self and the products of the individual's own labor. The ecological case was made by Thoreau, an early influence on anarchism, in his book *Walden*, for a life of self-reliance and simplicity in natural surroundings as a way of resisting the idea of progress exemplified in industrialization. The "progress" of industrialization was so forceful, however, that individualist anarchism's ideas now naturally seem somewhat quaint and impossibly far away from the individual who is so helplessly a victim of that progress. Likely as a consequence, anarchism added a few more divisions in its theory by incorporating ideals of the labor movement and communism, among others, in the second half of the 19th century. Though similarities abound, DIY happens to be a

somewhat more shallow concept than anarchism. It often resembles simply a tool for applying a theory, and consequently it can quite easily be manipulated to work for a system it regularly is used to resist — DIY represents a reaction against modernity, but by no means an articulate and comprehensive one.

Projects that defined the do-it-yourselfer over a century ago, from home improvement to furniture making, make up only a small portion of the vast catalog of DIY activities today. Dissemination of how-to and home improvement media throughout the 20th century certainly contributed to the growing popularity of DIY, but no greater force cultivated that popularity and encouraged the media production than the commodification of the required tools and raw materials. Look no further than the history of a single company to illustrate this development — In 1978, The Home Depot (originally billed as a DIY warehouse) started selling raw materials and tools at two stores in Atlanta; by 2018 the company operated 2,287 stores and reported sales of $108 billion in a single year.[5] Nearly all DIY activities, however countercultural, contributed to the cultivation of demand for these raw materials and tools. The *Whole Earth Catalog*, regularly published between 1968 and 1972 as a popular resource for the countercultural DIYer, promoted self-sufficiency and ecology alongside an extensive listing of products which could help the reader fulfill their self-sufficient aims. The *WEC*'s popularity at the time suggests that even the "initiative" of countercultural DIYers to practice self-sufficiency was realized in part as a consumer activity, contributing to the circuits of capital accumulation. Though nearly all consumptive activities today quite clearly contribute in one way or another to capital accumulation, it is significant that DIY practices often attempt to remove one or more of those mechanisms of accumulation.

Once the tools are bought and the materials are prepared, doing-it-yourself essentially means doing it without the cost of labor. It represents a practical alternative for those who can't afford or don't want to pay for that labor. However, the larger the project gets, the more it tests one's endurance, and a project like building a house by oneself could actually become impossible. As a result, and despite the popularity of DIY today, there are surprisingly few designs for practical do-it-yourself houses.[6] The Walter Segal self-build method, developed in the 1960s and 1970s, is one of those designs, and it has a proven — albeit limited — track record within self-build communities like Walters Way. It requires store-bought materials on a human scale, meaning the project is manageable for an individual, with some help on occasion. In projects employing a method like Segal's, which envision one or two inexperienced individuals doing most of the work, the absence of a labor force generally restricts the scale of the project and the volume of materials used as a result. It's one of the byproducts of cost restricted DIY projects; they tend to be easier on the environment.

5 "Annual Report 2018," The Home Depot, Inc., accessed November 17, 2019, https://ir.homedepot.com/~/media/Files/H/HomeDepot-IR/2019_Proxy_Updates/HDAnnualReport2018.pdf.

6 In some ways, by practical I mean affording modern conveniences, and here we have to face the vagueness of this line between what is necessary and what is unnecessary in modernity. Assuming I cannot make that determination, and knowing most people cannot live a completely isolated lifestyle, let's say that a DIY house should afford a very modest amount of modern conveniences.

On the other hand, a vast majority of DIY projects are not actually cost saving, and Gelber suggests that they never really have been. We're talking about the hobby, the kind of activity that Enzo Mari was probably referencing when he called DIY "a petty bourgeois metaphor for the acquisition of technical cultures."[7] The hobby is indeed, and it is also the cost unconstrained version of DIY that brought tools to the masses and The Home Depot stores to 2,287 locations. However, Mari's statement concedes something to DIY activities in any form — that technical knowledge is acquired, even if in small amounts. After all, something must be gained in the solitary pursuit of informed doing.

The way in which the public generally missed the point of Mari's *Autoprogettazione?* in 1974 speaks to the educational limitations of DIY projects. In the second edition of the proposal, published in 2002, he writes, "I thought that if people were encouraged to build a table, for example, with their own hands, they would be able to better understand the underlying thinking that has gone into it."[8] He simply wanted the audience to think critically about how furniture is designed and made, in general, while constructing his designs. Though most who engaged in the building process may not have come away with an understanding of his intent, the residual effects of their building experiences cannot be ignored. To continue the example, sawing the wood, arranging the planks, and hammering the nails are all required acts to complete Mari's table design, and each act has a learning curve.

Limitations aside, making or repairing something for the first time is undeniably an educational and empowering experience. The acquisition of a skill set and finding the confidence to reapply or expand on the repertoire of learned skills, list among DIY's benefits. Probably the most significant benefit is the second, wherein the process of learning by doing can permanently reduce the mental limitations on the physical self. In other words, one is empowered to contribute more to the surrounding built environment than one previously thought possible or practical. This idea of learning by doing, as popularized by John Dewey, was intended for a school setting as a way to teach manual competencies in everyday life. In practice, the school day would present real life problems relating to cooking, building and sewing alongside teachings on reading and writing, for example. Schools in the West have generally failed to adopt this method or have offered courses on manual competencies as a minor accessory to the main curriculum, and instead they focus on teaching subjects related to those that are needed for higher education and employment. Essentially, we are taught what we need to find a job, and with that job we can pay for someone to do a variety of vital things for us. There are adults on this earth today, not of any particularly privileged social class, who have never cooked food for themselves. For them, cooking is do-it-yourself.

We are already very much aware of our movement towards

7 Enzo Mari, *Autoprogettazione?* (Mantova: Maurizio Corraini s.r.l., 2002), 51.

8 Enzo Mari, *Autoprogettazione?* (Mantova: Maurizio Corraini s.r.l., 2002), 5.

new and less manual everyday practices, and we generally welcome this development as progress towards autonomy. We've been made to believe that the more activities each of us can contract out, either fully or partially to another entity, the more free time we will have for leisure and greater levels of happiness through consumption. With that same lens we imagine that the market has some sort of conscience, bending to the needs of the people — and whatever those needs, the market will provide products to fulfill them. But what gives us any indication that our needs are not also products of the market? There is something to learn from the consumer's parallel narrative, that of the producer, who has witnessed the successful implementation of faster and more efficient production technologies that free the worker from the tedium of certain manual tasks, all the while de-skilling the labor force and the lowering wages as a result. Here, progress is not always what it seems, much in the same way that autonomy for the consumer in one respect can come at the cost of dependency in another.

As our refrigerators get "smarter" every year, and planned obsolescence — or just plain cheap and breakable product — is more prevalent, it is becoming harder to hold onto any product of utility for very long, and even if we can, we're generally less inclined to. Victor Papanek voiced these concerns in his 1972 book *Design for The Real World*, a near endless critique of products and designers that included an entire chapter implicating auto designers in murder — funnily enough, it's called "do-it-yourself murder." In the book, he lists a variety of products next to their life spans, from automobiles to agricultural machinery and cameras. For example, a bicycle has a designed lifespan of 25 years, an actual lifespan of 2 years in the USA, and an actual lifespan of 75 years in under-developed countries.[9] The disturbingly unsurprising nature of these numbers alludes to the incredibly wasteful and destructive tendencies that have only exacerbated since 1972. Because the world's material wealth has increased since his book was published, the numbers on Papanek's chart would be noticeably lower today. To illustrate this point, all we have to do is look at our own waste. The United States Environmental Protection Agency website states that municipal solid waste produced by Americans, which includes "bottles and corrugated boxes, food, grass clippings, sofas, computers, tires and refrigerators," has increased significantly each year, from 121 million tons in 1970 to 267 million tons in 2017. Shockingly, 34 million tons of our waste was *burned* for energy in 2017, an increase from nearly half of a million tons in 1970.[10] Imagine the waste in a country like China, where the GDP has increased by 14595% and its population has increased by 574 million people from 1970 to 2018.

Against this backdrop, modernity turns on itself. The "right to repair" has emerged as a means of protecting ourselves and our environments from the increasingly complex machines that we consume, and once again the explicitly modern convention of DIY is

9 Victor Papanek, *Design for the Real World: Human Ecology and Social Change* (New York: Bantam Books, 1973), 50-51.

10 United States Environmental Protection Agency, Office of Land and Emergency Management, *Advancing Sustainable Materials Management: 2017 Fact Sheet, Assessing Trends in Material Generation, Recycling, Composting, Combustion with Energy Recovery and Landfilling in the United States*, 2019, 530-F-19-007, Washington, DC.

employed as both a countercultural and anti-capitalist tool. In October 2019, the European Commission ratified a series of regulations requiring appliance manufacturers to make spare parts available for up to 10 years and ensure those parts are replaceable with common tools. This law is far from empowering for the individual appliance owner, however, who is still required to pay an independent professional to perform the repair. To date, no other meaningful "right to repair" regulations have been implemented, though many are being considered (with immense lobbying opposition from electronics and appliance companies). Without a "right to repair," or a "need to repair," or a "repair culture," we maintain a distance between our products and ourselves, and actual product life spans remain out of our control.

Not only does this kind of conceptual distance exist between the commodity and the consumer, but between the consumer, producer, and commodity. Marx was particularly concerned with the way in which placing a value on a product of labor obscures social relations. By engaging in a system of market exchange based on private property relations, we are both controlled by market forces and ignorant of the social relations at play in both the production and exchange of the commodity.[11] We are similarly ignorant of the ecological relations that value, and the exchange, obscures. A scene from the show *Portlandia* comes to mind, where a couple are out to dinner and inquire with the waitress about the chicken listed on the menu. They aren't interested in the ingredients, or the size of the dish, or the cost; rather, they want to know if the chicken was raised locally, what its diet was, and how much room it had to run around while it was alive. We even find out that the chicken's name was Colin, before the couple decides to drive 30 miles out to the farm in order to confirm that the chickens are "happy" there.[12] Of course, the comedy lies in the absurdity of the couple's inquiry. Rarely are we provided information as detailed as even one of these points of the couple's inquiry, and rarely do we pursue this kind of information. But what about the more general ecological concerns, like the scale of cleared land, or the impacts on biodiversity, or the volume of carbon produced from the farming of these chickens; how do we account for these concerns while considering the purchase of chicken? Without having bridged these conceptual distances between the commodity and the ecological relations that contribute to its production and exchange, it comes as no surprise that we have not yet squared the most significant paradox of this decade, in which economic growth contains inherently destructive tendencies.

Maybe a "repair culture" would help suppress these tendencies. Though, without either the existence of product shortages — as previously described in the Soviet era — or an increase in product cost, waiting on the revival of a "repair culture" may be impossibly hopeful. When we have little control over market forces, any market-driven social reform is also impractical. What has proven

11 Karl Marx, *Capital, Volume 1* (United Kingdom: Penguin, 2004).

12 *Portlandia*, "Farm," IFC, January 21, 2011, directed by Jonathan Krisel, written by Fred Armisen, Carrie Brownstein, Jonathan Krisel, and Allison Silverman.

to be a more fundamental concern, embodied in this idea of a "right to repair," is our ability to make a choice between repair or not. Without defending (or in many cases re-establishing) our own agency, there is no possibility of addressing the problems we face.

Modernity has brought with it a dramatic development of our physical and social environments, and we have adapted in response. But to what end does this development progress, and will that progression meaningfully improve our quality of life? Does modernity even give us more control over our lives? We need to discuss DIY within this context, because in its essential form do-it-yourself is a reaction to modernity. It takes a position directly opposite to modernity, and it offers some of what modernity doesn't. In practice, DIY can be countercultural, or mainstream, or anti-capitalist, or capitalist, or educational, or ecological, or affordable, or simply it can be a means to re-claim some control. But each time we take an everyday action and call it DIY, it becomes an everyday action we no longer do every day. What might be the consequences of that?

1 Using the square tool and tape measure, measure and mark these lengths of wood: 2 pieces 34.5in (88cm) long, 6 pieces 27.5in (70cm) long, 2 pieces 15.75in (40cm), 2 pieces 17.75in (45cm), 10 pieces 20in (50cm) long.

2 Elevate the wood above the table and make cuts according to your measurements with the hand saw. Sand any rough edges of the wood after. If you would like your chair painted or finished, do this after step 2 and before step 3.

Making the two by one chair...

Materials

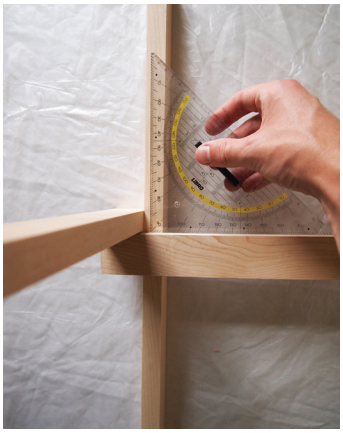
Smooth Planed Pine Wood, 1in x 2in (20mm x 34mm)
70 Flat Head Wood Screws, #6 x 1-1/2in (4 x 35mm)

Tools

Hand Saw
Power Drill
Drill Bits
Ruler or Tape Measure
Screwdriver
Square (or flat object with 90 degree angle)
Sandpaper, 180 Grit

*Any popular softwood can also be used, like Redwood. Metric wood measurements above are actual, not nominal, and availability may vary by location. 18mm x 34mm or 19mm x 38mm wood cuts will also work.

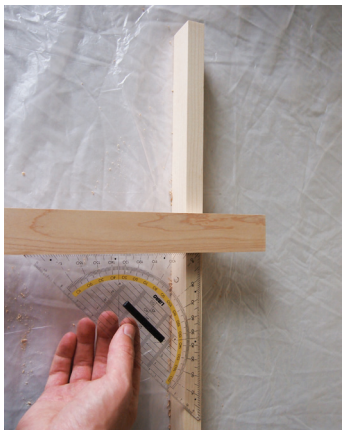
3 Arrange two 27.5in (70cm) long pieces vertically, and one 17.75in (45cm) piece horizontally, as photographed.



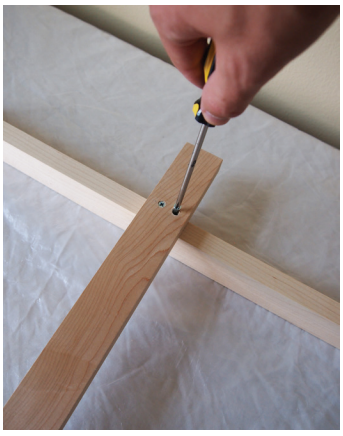
4 On the left side, align the horizontal piece 10in (25.5cm) from the top of the vertical piece. Using a spare length of wood, make sure the horizontal piece extends a full width of wood beyond the vertical piece. Use a square tool to confirm 90 degree angle.

5 Hold both pieces steady and drill two vertical holes, evenly spaced. Then countersink the holes (do this by drilling very shallow holes, the width of the screw head, in the first holes).

6 Screw the two pieces of wood together with two screws. The screw head should be flush with the wood.



7 On the right side, align the horizontal piece 10in (25.5cm) from the top of the vertical piece. The horizontal piece should extend 2.75in (7cm) beyond the vertical piece. Confirm 90 degree angle w/ square.



8 Drill holes and screw the two pieces together, as outlined in step 5 and 6.

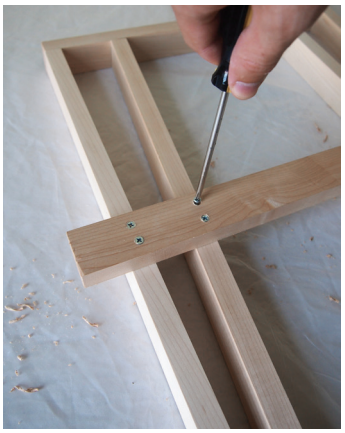
9 Align a 15.75in (40cm) length piece of wood so so that it is resting on the top of the vertical pieces and is flush with the left piece.

10 Hold the wood in place, vertically drill one hole, countersink and add one screw to attach the left vertical piece to the 15.75in (40cm) piece.

11 Repeat step 10, but this time securing the right vertical piece to the 15.75in (40cm) piece. Make sure both form a 90 degree angle.

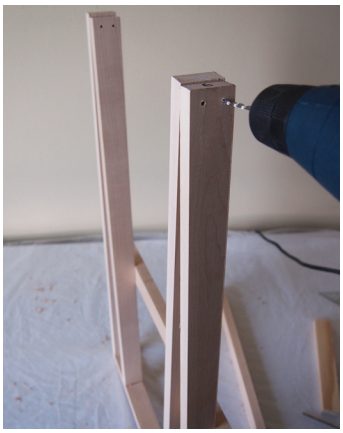
12 Place one 27.5in (70cm) piece to the right of the left vertical piece. Place one 34.5in (88cm) piece to the right of the right vertical piece.

13 Use the width of a spare piece of wood as a spacer, and pinch the two vertical pieces together on the bottom, making sure the ends are flush.

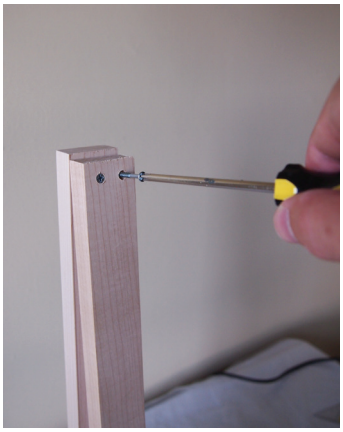


14 Hold the wood in place, drill holes and add two screws to secure the new 27.5in (70cm) piece.

15 Repeat steps 13 and 14 to secure the new 34.5in (88cm) piece.



16 On the angled side of where the set of vertical pieces come together, drill two holes, countersink, and add screws. Screw heads should be flush.



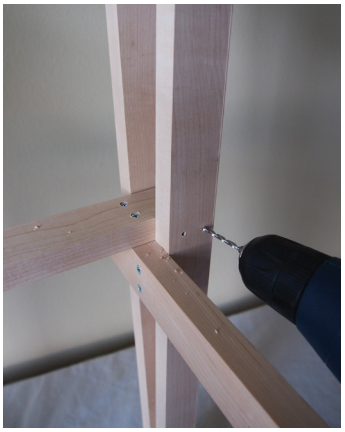
17 Repeat step 16 on the second set of vertical pieces. Make sure the two pieces are pinched together firmly.

18 Repeat step 10, but this time securing the angled vertical piece to the 15.75in (40cm) piece.

19 Repeat steps 3 through 18, but this time making a mirror image of what you made.

20 Place one 20in (50cm) piece between each vertical triangle. Make sure each piece is flush with the outside of the frame.

21 Drill vertical holes, countersink, and add two screws to the 20in (50cm) piece, securing it to the 17.75in (45cm) piece. Repeat in 3 other locations to secure the frame.

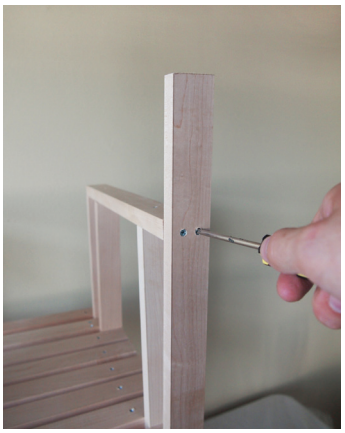


22 Drill holes, countersink, and add two screws to the vertical 27.5in (70cm) piece, securing it to the 20in (50cm) piece. Repeat in 3 other locations to secure the frame.

23 Arrange three 20in (50cm) pieces. They should be touching the vertical 27.5in (70cm) pieces, as pictured.

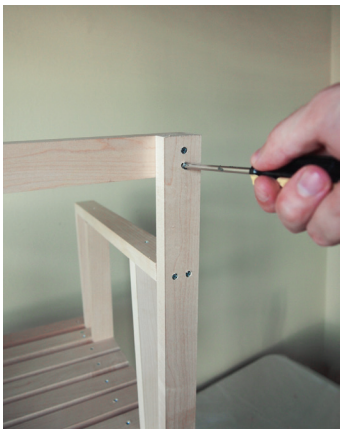
24 Drill one hole, countersink, and add one screw to secure the 20in (50cm) piece to the 17.75in (45cm) piece. Repeat on both sides until all 20in (50cm) pieces are secure.

25 Place three 20in (50cm) pieces, evenly spaced in the remaining section of the frame. Attach to the frame, as done in step 24.



26 Drill holes, countersink, and add 2 screws to secure the 15.75in (40cm) piece to the 34.5in (88cm) piece. Repeat on the other side of the frame.

27 Align one 20in (50cm) piece to the ends of the 34.5in (88cm) pieces, as pictured.



28 Drill holes, countersink, and add 2 screws to secure the 20in (50cm) piece to the 34.5in (88cm) piece. Be careful the screw and/or holes are not too deep. Repeat on the other side of the frame.

29 Arrange a 20in (50cm) piece about 3/4in (2cm) below the one from step 27, and repeat the process in step 28.