



BREAD

ISSUE 4:
HEAT

BREAD

GOOD BREAD is quite simple: It gets made when a skilled craftsperson—using flour milled by a skilled miller—takes all the time she needs to make bread the way it has been made for centuries.

Without rushing the process.

GOOD BREAD is an every day treat. A daily bread that not only feeds the hungry but brings a smile to his face.

Good bread ties us to the tradition of the generations that came before us, and keeps bonding us closer to those who live with us today.

Good bread is baked with love, for the people most precious to us.

THIS IS A MAGAZINE about good bread. Made by people who love bread, for people who love bread.

And who make bread.



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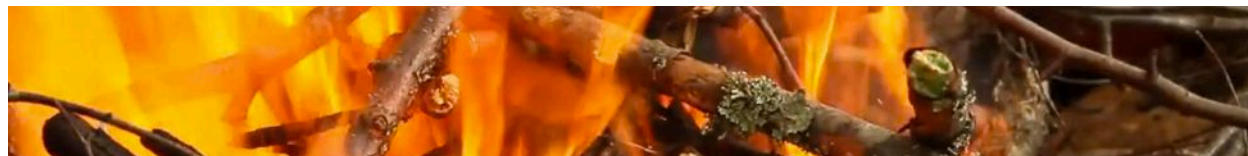
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WELCOME!

SHAPING BREAD IS NOT EASY.

I am sure we have all been there: uneven baguettes, boules that won't keep their shapes, and so on. But just as in every part of this craft, practice—guided by some good instructions—always gets you to the results you are looking for.

As I was preparing the first draft for the contents of this issue of Bread, an idea for an article came to mind, and I wrote it down. Shaping Bread*. That was when it crossed my mind: it's not just the baker who shapes bread. Shaping also happens the other way round.

The baker is shaped by his or her bread every day.

A BIG PART OF THE beauty of bread making lies in the fact that you can't rush it.

To master the craft, you have to learn to wait and read the dough: Has the flour been hydrated for long enough? How

long should the fermentation still be left to go on? Is the dough strong enough or does it need one more stretch and fold?

And it's not just the dough.

You also learn to look for cues on how the weather will affect your bread. Looking at the temperature and feeling the level of humidity in the kitchen make you more aware of your surroundings.

IN ALL, baking bread is a fine exercise in slowing down and using all of our senses: smelling the dough, touching it, tasting the sourness of your starter, and simply looking at how the bread looks like at all the different steps of the process.

Bread shapes us. And that's good.

About the magazine

BREAD IS A MAGAZINE for people who love and make great bread. It is all about bread and the people who make it.

Instead of sharing lots of recipes, the magazine focuses on what counts: helping you better understand the process of bread making, encouraging you to learn by doing, and sharing stories and interviews that inspire you to dig deeper into bread.

AS A MICRO MAGAZINE—a focused magazine made by a very small, dedicated team of one for a devoted audience—Bread is not for everyone.

But if seeing a beautiful loaf of bread makes your heart smile and sticking your hands into dough sounds like a great way to spend a Saturday evening, I believe it is for you.

About this edition

IN THIS ISSUE, our main focus is on heat—or in other words, the oven.

In a way, an oven is nothing but a simple appliance that generates and stores heat so that it can be used for cooking. In this issue, we will look at what happens in the oven and how you can prepare your bread (and the oven) to get the best results possible with the tools you have at hand.

But there is something more to the oven. Throughout the years, the oven has

been the heart of the community, be it a big family home in Finland or an entire village in the French Provence.

Although most of us today bake bread in regular electric or gas ovens, a wood fired oven still stirs some emotions deep in our hearts. And as we will see in the story about community ovens, they still have the power to bring people together.

I hope you will enjoy the journey into heat and maybe learn a thing or two.

Share and talk back

IF YOU HAVE ANY FEEDBACK or questions, don't hesitate to send me a note at contact@insanelyinterested.com. I try to answer all the email I get.

Also, if you have friends, neighbors or relatives who you think would enjoy reading the magazine, pass them a copy—in person, through Facebook, Twitter or any means of communication you like to use.

THANKS FOR READING, and with Christmas just behind the corner, I wish you happy holidays and a lot of baking in 2013!

—*Jarkko Laine, editor and publisher*

SHARE AWAY

AS YOU READ THE MAGAZINE, you will notice that at the beginning of every article, there is a small button that looks like this:

SHARE ...>

IN CASE you are wondering, it's a share button, and here is how it works.

1. **CLICK.** When you click on the link, the article opens up on a web page in your web browser—as a version optimized for the web and sharing.

2. **SHARE.** The article on the web is free to share without limitations, be it on Facebook, Twitter, email, or any way you like.

Enjoy!

Ovens That Build Communities | Bread

OVENS THAT BUILD COMMUNITIES

by Jarkko Laine

Tweet 0 Like Send Be the first of your friends to like this.

WHERE DO WE GO when it is time to spend a few hours and meet and make friends?
The answer proposed by most of the western society is a combination of cafés, restau-



THE OVEN

IN BREAD MAKING, heat usually means heat generated in an oven, whether big or small, heated with electricity, gas or wood fire.

Our ovens are all different, and a part of learning to bake bread is getting to know your oven. This is why I asked three home bakers to share photos of their ovens and some thoughts on what it is like to bake in them.

Enjoy! And if you like the idea, you can add to the gallery by sharing your oven on the magazine's [Facebook timeline!](#)

SHARE ...>



VARDA HAIMO

"I BUILT A SMALL wood-fired oven three years ago so I could bake bread during the hot summer months. I made it with salvaged, recycled and purchased material, quite inexpensively.

The oven is constructed in layers for heat absorption and retention, with an insulating layer of glass bottles in a perlite and mud mix, topped by a heat mass of slabs of brick wall.

The granite hearth and fireclay dome sit atop this base.

"IT IS HARDER AND MORE FUN fun to bake bread in a wood fired oven, as fire building must be added to the baking schedule.

Since I sited my oven a distance from the house for safety reasons, I do a lot of running back and forth while baking.

What makes it completely worthwhile to me is the quality of the resulting bread—the hot floor and radiant heat produce great oven-spring and deeply browned crusts.

My primitive wood-fired oven is completely suited to making that most basic of foods—bread."



PHILIPPA WINSTANLEY

THIS DOUBLE OVEN is the heart of the small home baking business that Philippa Winstanley started just three months ago.

She bakes baguettes, ciabattas, sourdough loaves, malthouse and white loaves as well as weekly specials. She says she is living her dream, spreading her love for bread—and loving every minute.

The two sides of the oven both have their own personalities. "I have totally got used to it now though, as you have to with all ovens," Winstanley says. "The left doesn't seem to get as hot as the right, so I generally have to knock off a couple of minutes baking for loaves done in the right. I also use the left as a mini prover for sourdoughs overnight sometimes if my kitchen is extra cold."

FOR A BAKERY BUSINESS, a double oven is a life saver: "It's all a bit mad on bake day and both ovens are going most of the morning, but I certainly could not do what I do without the double oven I have." Winstanley says.



MELANIE CHRISTOPHERSON

"MY OVEN IS WHAT I would consider an average household oven found in most homes in America.

I purchased the oven before I began any serious baking, never knowing I would use it to such an extent. To improve its precision, I keep a baking stone on the bottom rack at all times to help with heat retention and I regularly employ a removable thermometer to ensure temperature accuracy, which makes for an inexpensive upgrade.

I am passionate about bread baking, and although I do cook and bake other things, rarely does a day go by that my oven isn't attending to at least one loaf of bread.

"ALTHOUGH MY OVEN IS HUMBLE and doesn't possess frills, I have learned to bake some amazing things in it, which is proof positive that all I need to bake great bread is passion for the craft, a few ingredients, and my oven."



JARKKO LAINE

LOOKING AT these three ovens, I realize they all look different from mine.

My oven is a very basic electric oven, the kind that you will find in most Finnish homes. It comes with a convection mode and a timer, but apart from that is just a basic oven.

But it's my oven. The oven that I have used to practice everything I know about baking bread.

THE OVEN was there when we bought our apartment so I didn't pick it, but it works.

And this, I believe, is the biggest takeaway from this series of ovens: people bake great bread in all kinds of ovens.

Some ovens are like mine and get a little bit hotter at the back than the front and leak some steam when you try to keep your loaves moist. Others have their own, unique quirks.

What makes the biggest difference is learning to live with the oven and its good and bad—through clever tweaks and practices.

WHAT DO YOU like about your oven?



OVENS THAT BUILD COMMUNITY

[SHARE ...>](#)

WHERE DO WE GO when it is time to spend a few hours and meet and make friends?

The answer proposed by most of the western society is a combination of cafés, restaurants, movie theaters and air-conditioned shopping centers. All of them spaces built around the consumption of money and operating under rules set by the owner and not the community that uses them. In today's cities, libraries are some of the last places where you can spend time without having to open your wallet—and in libraries, you need to remain quiet.

As Bryce Johnson, pastor and one of the oven builders we will meet in this

article says: "We have a lack of public spaces for people to just be together and share in fellowship."

FOR A GROWING NUMBER of people, third places run by profit maximizing businesses are not enough. While they enjoy a good cup of coffee just as the next person, they want more options.

This do-it-yourself—or better yet—do-it-together movement of loosely organized groups of people is changing our cities through initiatives such as Restaurant Day and urban farming.

IN "[THE BREAD BUILDERS](#)", Daniel Wing tells about how "after the revolution most



French rural ovens became public property (owned by the municipality, the commune)."

These ovens were used by the villages' families, each baking once a week or once every other week.

Wing continues: "The dough was proofed at home, then carried to the oven on a long wide board. The loaves going into the oven were slashed with distinct patterns so each family got back its own—really its own, since the grain from which it was made was grown on their farm."

In that time, although not free to use, community ovens were some of the most important third places: places where you would meet neighbors and discuss politics.

Times changed and people lost touch with these traditions. But maybe they can change again, taking just the best elements from the past and building on them? In this article, we are about to meet three groups of people who are getting together to build ovens and bake bread or pizza—and to build a stronger community.

Helsinki, Finland

IN 2010, KATHARINA MOEBUS was finishing her master's studies at the University of Art and Design in Helsinki.

As a part of her thesis work, she needed to find a place for baking bread together. She could not find one, and in a city you can't set up fire just anywhere you like, so she started exploring the possibility of building the oven herself.

Through a friend, Moebus heard about *Kalatatama Temporary*, a city initiative for experimentation through urban design projects in a temporary location soon to be replaced by new city development.

"After visiting the location, it was clear it would be perfect—being a construction site, nobody from the city would really care too much about regulations. Also, there was some nice underground cultural activities going on through the provision of empty shipping containers open to all sorts of institutions and organizations." Moebus says.

FINDING A LOCATION was just the beginning. To make the project come true, Moebus needed other people's help.

She put up a post on the web site of [Public School Helsinki](#), an educational platform that connects people who want to teach and learn in alternative ways, and found the group of people she now refers to as "the gang."

"Two persons from the gang—Salla

and Tanja—had participated in cob oven workshops in Germany and the UK before. Their previous experience was a great encouragement to just try it out." Moebus says.

A GOOGLE SEARCH brought the gang to [Simon Brookes's web site](#) and to his e-book that describes the process of making a clay oven in great detail.

Equipped with this information and ideas collected at a planning workshop, the gang was ready to get to work.

The oven, which they nicknamed "Archie" was built in one weekend for a price of a mere 80 Euros—thanks to clever reuse of recycled bricks, sand from construction sites and clay from the forest. The only materials that the group needed to buy as new were the food proof fire bricks from a hardware store.

"It was surprising how well it all went!" Moebus says.

ALTHOUGH THE OVEN was initially created with a specific food event in mind, the group soon decided to make it available for anyone interested in baking in it.

"We established a blog with instructions and a calendar function.



"I enjoyed the playfulness and spiritedness of gatherings there, and how humble I often felt, so amazed that our clay oven could spit out such a variety of delicious food."

People could contact us for questions and reservations through a general email address to which we all had access." Moebus says.

There was a good amount of interest, and a lot of pizza was baked. Some bread as well, but mostly pizza.

"Pizza is such a convivial food that tastes best from an oven such as this that it was probably one of the most favored dishes baked during the oven's life span." Moebus explains.

Sarah Alden, another member from the gang, agrees.

"I enjoyed the playfulness and spiritedness of gatherings there, and how humble I often felt, so amazed that our clay oven could 'spit out' such a variety of delicious food. I remember the first pizzas we made as the best pizza I've ever eaten," she says.

ARCHIE WAS NEVER MEANT to last for decades. The location was temporary and the goal was more in experimentation than lasting impact.

But the oven was sturdy and, even in Finland's harsh weather, lasted for two full years—longer than the team had expected—before it was destroyed beyond repair.





"Archie's remains have been turned into a grill by one of its users, so we're happy somebody came up with a nice idea."

"We didn't even think it would survive the first winter." Moebus recalls.

So, when the oven broke down, the team felt it was time to move on. The place surrounding the oven had changed a lot over the two year period and new ovens had just been built at two new locations in Helsinki.

And even Archie got a good final resting place: "Archie's remains have been turned into a grill by one of its users, so we're happy somebody came up with a nice idea." Moebus says.

White Bear Lake, Minnesota

TO GET TO THE NEXT OVEN on our journey, we need to travel 5,000 miles (8,000 kilometers) west from Helsinki, all the way to White Bear Lake, Minnesota where Bryce Johnson leads [White Bear Lake United Methodist Church](#).

Johnson is the pastor for a vibrant congregation, but having baked since college, he is also a man with a strong passion for bread. As his bio on the church's web site explains it: "Bryce's avocation is bread baking and brick ovens; his vocation is connecting people to Jesus, 'the bread of life.'"

IN 2002, Johnson attended a four day

oven building class taught by Alan Scott—and built an oven in his backyard. During the course, Scott spoke about community bread ovens, and a seed that would one day lead to building a beautiful oven in the church yard was planted in Johnson's heart.

Six years later, it was time for the next step: "I applied for a Clergy Sabbatical grant through the Lilly Endowment, Inc. in 2008. Their application began with one simple question: 'What will make your hear sing?'" Johnson says.

The answer was easy: bread making.

JOHNSON PROPOSED a three month sabbatical focusing on Jesus's phrase, "the bread of life," through learning to bake artisan bread in Italy and France and visiting ancient communal ovens.

"In Europe (and throughout much of the world) communal ovens were located at the center of the village. It was a gathering place where family news was shared and politics discussed. We have a lack of public spaces for people to just be together and share in fellowship." Johnson says.

And so, when Johnson returned home from his sabbatical, he had a plan to build a community oven for the church.



"We have developed a solid core of avid bakers who gather on bake days but have found that we need to find ways to simplify this for the less experienced."

"At church, it was an easy sell. People loved the idea and we had over 40 people involved in the construction." he recalls.

TODAY, THE OVEN IS a central part in the life of the church—known as the "bread church" in the White Bear Lake area:

The oven is featured on their web site.

Community bake days are organized on the first Saturday of each month.

The communion bread used in the church is baked in the oven.

And every Sunday, the congregation shares brick oven bread to first-time visitors.

BUT BAKING BREAD IN a community oven is not something modern city dwellers are familiar with, so the church has had to come up with new ways to help people make the most out of the oven.

"We have developed a solid core of avid bakers who gather on bake days but have found that we need to find ways to simplify this for the less experienced." Johnson says.

To address this issue, the church has created a new activity called "Bake & Take" where dough is prepared in advance and participants get to start right from shaping the dough.

A DAY AT THE OVEN

FRIDAY 5 P.M:

Volunteer starts the fire.

FRIDAY 10 P.M:

Volunteer returns to stoke the fire.

The fire burns overnight.

SATURDAY 12 noon:

Bake day leaders arrive to clean out the ash from the oven, check temperature and set up for the arrival of bakers.

BAKING SESSIONS at 2, 3, and 4 P.M.:

20 loaves are baked at each session. Participants can bring two loaves for baking. It is common for bakers to share a portion of one loaf with others and take the other loaf home for dinner.

After the final bake, participants help clean up and the oven is closed.



"When they arrive, we teach participants to shape the dough. While it is rising, we share the recipe and talk through the bread making process. When the dough is ready to bake, they get to put it on the peel and into the oven. When it is all done, they get to take home a loaf of brick oven bread." Johnson explains.

ONE OF THE BEST EXPERIENCES at the oven for Johnson has been helping Catholic Charities in Minneapolis in their 10 week Culinary Skills Job Training program for the poor and unemployed.

"In the eighth week of that program, we offer a bread class at the church." Johnson says.

"I partner with a former professional baker and we teach basic bread making and then bake in the community oven. It is such a joy to work side by side with these folks. They are eager to learn. At the close of the class we break bread." Johnson says, and adds that more than half of the participants in the program find work after the program.

In the future, he hopes to continue to foster more partnerships with organizations in their community.

"Specifically, we want to bring in youth groups and adult groups to make and

"Bread and wood-fired ovens connect me to the earth. It keeps me grounded in simplicity and the rhythm of life. And as a spiritual person, it reminds the sacred is most readily found in the ordinary."

bake bread which will be distributed through the local food shelf and free meal programs for the hungry. The oven is also great for pizza events. We are hoping to offer regular pizza nights during the summer."

MAINTAINING A COMMUNITY OVEN is a lot of work, but Johnson's words make me believe it is well worth the effort:

"Bread and wood-fired ovens connect me to the earth. It keeps me grounded in simplicity and the rhythm of life. And as a spiritual person, it reminds the sacred is most readily found in the ordinary."

Dartmouth, Canada

WHILE ARCHIE IN HELSINKI is already history and the White Bear Lake oven has been in active use for a couple of years, [Park Avenue Community Oven](#) in Dartmouth, Canada is brand new.

It got its first firing on September 22, 2012 and the team is just getting up to full speed.

THE TEAM'S MEMBERS found each other through word of mouth and Facebook, and inspired by ovens in parks around Canada—such as [Dufferin Grove Park](#) in Toronto, they decided to build an oven in

their home town.

The oven became a part of Dartmouth Commons, an area of approximately 300 acres of land dedicated for common use and strictly regulated since late 18th century.

"We felt that a community oven would complement and extend the activities around the garden. Growing food as a group and then baking together." says Lorrie Rand, one of the organizers of the Park Avenue Community Oven project.

"We want to get people out of their houses and into the parks. Lots of children use the parks, we want to give everyone a reason to come out."

BUILDING THE OVEN in Dartmouth Commons meant that the team needed to involve city officials from the beginning. The municipal councillor and the Superintendent of Parks supported the project, which proved valuable when some neighbors, unaware of what was being built, opposed the project.

"Building on the Commons is contentious as the Common is intended as a protected green space but in the past the space has been encroached upon by buildings. Most of these people are happy with the oven now." Rand says.

AT FIRST, the team considered building the oven themselves, but it soon became clear that the oven required a shelter to protect it from vandalism and the cold and snowy winters of Nova Scotia, something they didn't have enough expertise to build themselves.

They chose a skilled builder, Gena Arthur, who has experience from building over 30 cob ovens and asked her to build the oven and a shelter for it.

"Since we wanted this to stay here for a long time, we wanted it done right." Rand says.

WHILE THE OVEN WAS being built, the team discussed the details of using the oven.

"We did a lot of talking about how the oven would work, how people would get access, what kinds of activities we'd do. But we didn't really have all of this resolved before it was built, partly because nobody in the group had ever actually used a cob oven." Rand says.

The plan was to have the oven finished and ready for use during summer. This didn't happen. Building the oven took a little longer, but Rand is not sorry about the delay:

"It turned out to be for the best as we

"We did a lot of talking about how the oven would work, how people would get access, what kinds of activities we'd do. But we didn't really have all of this resolved before it was built, partly because nobody in the group had ever actually used a cob oven."



were able to take the fall slowly to figure out what works for us. Fall is very beautiful here and we were lucky."

And this first fall sure has been an active time around the oven:

"Our plan was to use each weekend to train people who will be able to staff the oven in the future and have open times for people to come and try baking. Between September and this week [mid November] we only had one Saturday cancelled due to rain. Participation grew each week until it peaked on November 10. The next week was small, but quite a cold day. A community has definitely started to grow around the oven with a number of families attending regularly."

NOW, IN DECEMBER, the oven more or less closes for winter. The temperatures fall below zero degrees Celsius at night, meaning that it will take many hours to heat up the oven, so instead of trying to bake regularly, the team is planning to host a few events—"Perhaps a Solstice party," Rand suggests—and otherwise focus on planning for next spring's events.

"We will have a kick off party in the spring when we think it's nice enough out. Our spring can be very rainy and the area around the oven will need to be



"Most importantly though, a successful community oven project is about people: the right team and the right connections."

reasonably dry so that people can walk there." Rand says, and continues to tell that they already have a lot of ideas for activities to do next season.

"We will continue to have weekly training sessions and open oven times. We also have some groups who may use the oven for therapy programs, children's events. We will likely have a regular bread baking day. We also want to do a series of special events—possibly family dinners or movie screenings. We have an idea about partnering with local restaurants and having chefs come bake in the park." Rand lists the many ideas they have for next year.

Winter is the time for decisions and formalizing the roles and responsibilities within the team, and I can't help but think that the future for Park Avenue Community Oven is looking bright—as long as the team can keep up this level of excitement.

Is your home town next?

AS THESE THREE EXAMPLES SHOW, building an oven for your community is possible, even if getting started with one feels overwhelming.

If you are excited about the idea, the first thing—as with any big project—is to

just get started. There is no right time, and if you keep waiting for one, the idea will never turn into reality.

But getting started isn't all there is to it, so I asked the people behind these three oven projects to share some tips on where to start with building a community oven.

KATHARINA MOEBUS, who together with her gang built Archie, the temporary cob oven in the middle of Helsinki, has collected six steps that will help you make your oven building project come true:

1. Say out loud what you dream of.
2. It's worth sticking to crazy ideas.
3. Collect the makers and start doing. Materials are almost free.
4. Just google.
5. Combine your knowledge for a collective intelligence.
6. Enjoy the process.

MOST IMPORTANTLY though, a successful community oven project is about people: the right team and the right connections.

First, you need to collect a group of people interested in building and using the oven, whether it is through Twitter, Facebook or an organization you are a

member of.

It is important that the team shares a common understanding of what they are trying to achieve and is dedicated to putting in the necessary effort.

Lorrie Rand says: "A lot of people have different visions for what the project would accomplish and how we'd use the oven. I'd suggest that everyone be very clear about communicating their ideas and getting to some common ground."

IN ADDITION TO building the right team, you need to get in touch with local officials.

"It is important to consult your local municipality, insurer and health department before proceeding. You don't want to invest the time and money to find out later there are significant restrictions." Bryce Johnson says, and continues:

"Alan Scott, who was the pioneer of brick oven construction in this country noted that concerns over litigation have kept people and communities in the U.S. from building ovens.

"In our experience we found the local government, health department and insurer very helpful. They had some restrictions and requirements we had to meet, but all along they were supportive

of our effort."

Moebus has had similar experiences:

"We actually had a permission to build Archie, from the city and the fire department. We even had to sign a contract to take over all responsibility. It was a bit of a struggle, but we appreciate the city's openness towards this project—they could have said no, after all! So it surely is sometimes worth collaborating with city officials and getting necessary permissions to prevent such a project from being removed after a short time."

WHEN YOU HAVE the right people and connections in place, the rest becomes rather straightforward—even though it still is a lot of work.

Decide on the type of oven you are going to build, then look for instructions or connect with someone who knows how to build one, and get to work.

"Start slow, we have a small group doing a lot of work and burning out is a real risk. We will be spreading the work around more next season. Do lots of research beforehand." Rand adds.

AND WHO KNOWS, maybe it is you who will organize the next community oven project!





HEAT SCIENCE

A WELL BAKED LOAF OF BREAD is marked by a crisp, deep brown crust and a controlled ripping from having risen inside the oven—an effect known as "oven spring." It is thoroughly baked. And it tastes delicious.

When you cut through the cooled loaf of bread, you will notice that the bread is full of holes, evenly distributed all around the bread and not just the sides. This is a sign that the heat from the oven has had time to reach the middle of the dough before crust formed and removed any further opportunity for rising.

ALL OF THIS is of course a matter of taste and only true for a specific type of bread, the self standing hearth bread that is baked without the help of a baking tin.

That said, while I will focus on that type

of bread in this article, there are things to learn even if a tin loaf is your choice of preference.

GETTING ALL of these elements right begins well before the dough goes into the oven. The loaf needs to be strong enough to hold its form as it bakes and be proofed for just the right amount of time so that the gas bubbles created by fermentation are readily available everywhere in the dough.

"A properly proofed loaf has gas throughout that transfers the heat relatively quickly, so heat is able to reach the center of the loaf quickly, allowing gas at the center to participate in oven spring." Emily Buehler writes in her book, [Bread Science](#).

We talked about judging the readiness



"The events that take place in the dough as it turns into bread can be organized on a timeline by the rise in the inside temperature of the dough."

of a dough for baking already in the previous issue of *Bread*, so this time we will focus on what happens inside the oven.

Let's take a look.

THE EVENTS THAT TAKE PLACE in the dough as it turns into bread can be organized on a timeline by the rise in the inside temperature of the dough.

When the dough enters the oven, it is at about room temperature or maybe a bit below, if it has been retarded in the refrigerator before baking. But when you place it on top of a hot baking stone or hearth, heat starts to flow into the dough.

This happens through three different methods: *conduction*, where heat flows from a hot object to a colder one it touches, *convection*, where a fluid—in our case air—carries heat from a hot object to a colder one, and *radiation*, where heat flows directly from the heat source to the object being heated without relying on physical contact or a fluid.

WITH THE BREAD IN THE OVEN, let's take a look at what happens to it during the bake.

Oven Spring

THE FIRST 10 minutes that the bread sits in the oven, when the dough is still soft and a crust hasn't yet formed, are the time for the most dramatic phase in baking the bread: the oven spring.

Before the yeasts inside the dough die at about 60°C (140°F), they speed up, pumping more carbon dioxide in the dough and making it expand.

At the same time, as heat enters the dough, it makes the bubbles of carbon dioxide expand—gases expand as they heat—and push the dough, forcing the whole loaf of bread to expand as well.

This effect is further enhanced by the expansion of other gases such as water vapor and ethanol also present in the dough.

IN [The Bread Builders](#), Daniel Wing writes:

"About one-quarter of oven spring is due to expansion of carbon dioxide already in the cells; one-fifth is due to migration of existing carbon dioxide into the gas cells, and a little less than half is due to boiling of alcohol into cells. The rest comes from steam generated inside the loaf and from some additional carbon dioxide produced in baking bread before the yeast is killed. This last doesn't

contribute much to oven spring because there isn't much time for it to occur."

OVEN SPRING CONTINUES until the temperature of the surface rises high enough to start forming a crust, or the interior dough sets as a result of denaturation (more on this later).

If the oven is dry, crust comes first.

"The outer surface is where the dough heats up fastest—once it dries out and crust begins to form, the dough will not be able to expand any further." Buehler writes.

BECAUSE OF THE HIGH water content in a bread dough, during a normal baking time for a loaf of bread, the temperature inside the bread never rises above the boiling point of water: as water heats to 100°C, it turns into water vapor, thus cooling the dough.

This way, for a while, water escaping from the dough as water vapor keeps the top of the bread moist and cool, preventing the heat driven reactions from proceeding too fast.

Because of this, keeping the top of the loaf from drying too fast will help you achieve maximum oven spring. That can be done either by insulating the loaf and



thus "re-using" the steam escaping from the bread or by introducing steam in the oven yourself.

"Steam condenses on the relatively cool dough, creating a layer of water on the surface. At first, this provides a burst of heat to the dough; the water vapor contained energy that is released as heat when the vapor condenses. Subsequently, the water layer cools the surface by evaporation. This slows crust formation, creating time for heat to reach the center of the loaf and promote expansion." Buehler writes.

ANOTHER IMPORTANT REQUIREMENT for proper oven spring is heat.

As Wing writes: "If an oven too cool the gas won't boil out of the dough fast enough, water won't boil and turn to steam fast enough, and the pressure rise in the dough won't rise high enough to overcome the tendency for the loaf to sag and spread as it heats and thus gets softer."

Crumb

AS THE DOUGH HEATS, starches and proteins go through changes that create—among other things—the moist and chewy yet solid crumb.

"Subsequently, the water layer cools the surface by evaporation. This slows crust formation, creating time for heat to reach the center of the loaf and promote expansion."

The first of such changes happens at about 55°C (130-135°F) when gluten gets hot and becomes softer and more plastic. This step is known as gelatinization or gelation depending on source.

"The starch gelates by absorbing nearby water molecules, some of which were being 'held' by proteins. This begins at around 60°C (~140°F) and increases to temperatures around 80°C (~180°F), giving the bread the structure it needs." Buehler writes.

GASES IN THE DOUGH expand and grow the holes that were originally created by kneading and fermentation and that we see when we cut through the bread.

Starting at around the temperature of 74°C (160°F) proteins are denatured and lose their ability to trap the gases, which then escape the dough, leaving the holes behind.

This is important, Buehler reminds, because "if they did not escape, they would condense on cooling and the bread would collapse."

WHEN PROTEINS are denatured, their physical properties change. According to Wing, "They lose flexibility, extensibility, and solubility, but remain elastic."



This is the same reaction that is responsible for eggs becoming hard-boiled as they cook.

"When the proteins are stiff enough, at about 200 degrees Fahrenheit (95 degrees Celcius), gas cell expansion halts and the final shape of the loaf is set." Wing writes.

AFTER A WHILE, all of the dough should have reached this state where dough has changed from "a plastic paste to a semi-solid gel throughout the loaf." as Wing describes the process.

A sign for this, assuming that the loaf has been baked evenly, is the hollow sound when tapping the bottom of the loaf.

Crust

AS I MENTIONED ABOVE, water, as it heats inside the dough, turns into steam, thus limiting the temperature of the interior of the loaf at just below the boiling point of water.

The crust is the only part in the bread where the temperature rises higher.

AS DOUGH TEMPERATURE rises above the boiling point of water, enzyme-driven reactions that convert starch into sugars and proteins into amino acids increase,

releasing more sugar and flavor compounds.

This sugar then breaks down and participates in the two types of chemical reactions that produce the tasty and good-looking crust we strive for in good bread: *Maillard reactions* and *caramelization*.

Maillard reactions, which were found in 1953 to be responsible for most of the browning of the crust as well as flavor, start at about 120°C (250°F) and caramelization at around 165°C (330°F).

STEAM COOLS THE DOUGH so baking the bread in a moist environment at the beginning increases the time that available for Maillard reactions, making the crust tastier, thicker and chewier.

"Steam's cooling effect on the surface of the dough provides the moist, not-too-hot climate needed to keep enzymes working. More steam creates a thicker layer of water and allows more reactions to occur; this results in more sugars and amino acids available for browning reactions and therefore makes a thicker crust." Buehler writes.

If the crust stays pale, it can be a sign of over-fermentation.

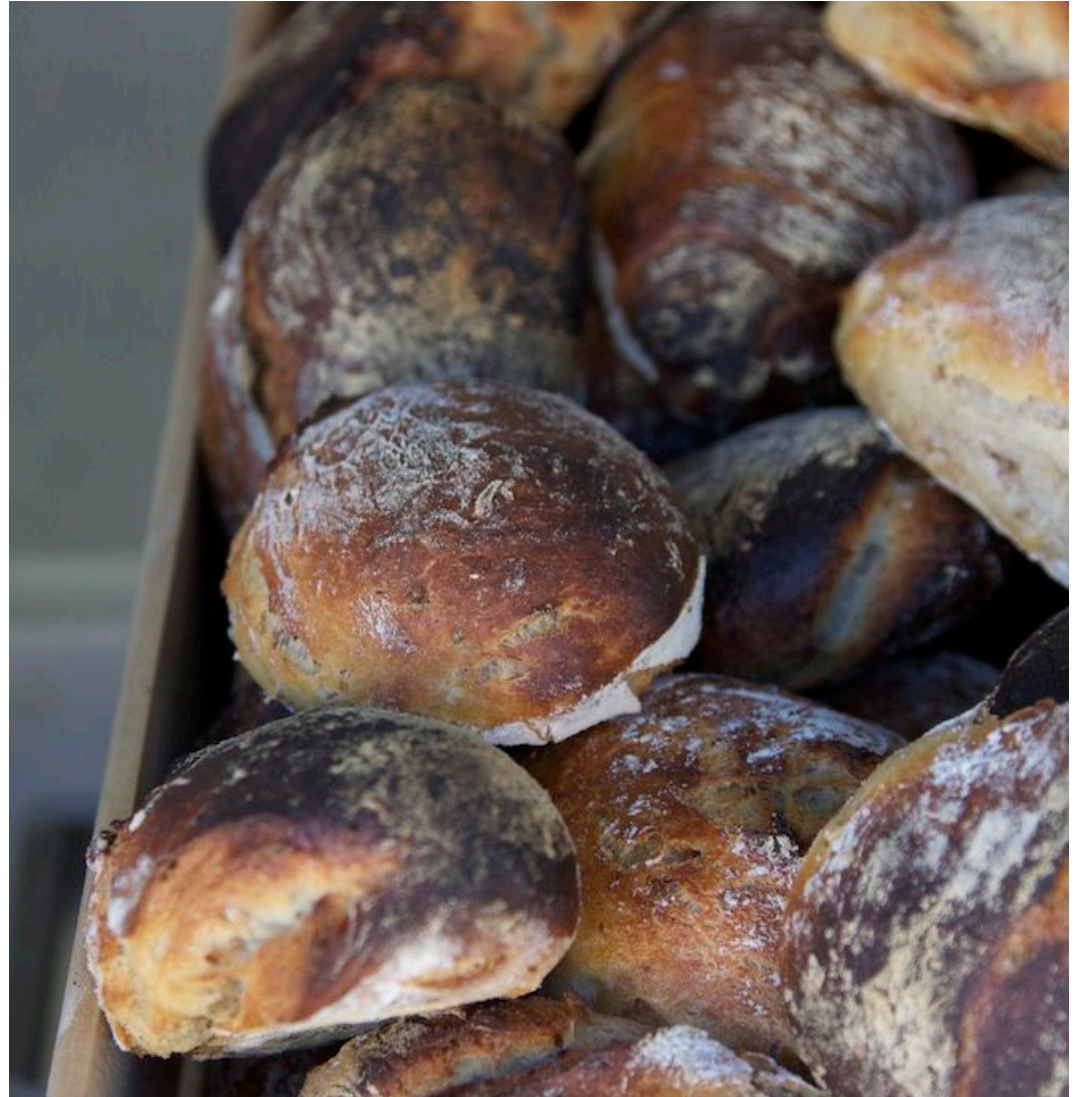
Andrew Whitley writes in [Bread](#)

"As dough temperature rises above the boiling point of water, enzyme-driven reactions that convert starch into sugars and proteins into amino acids increase, releasing more sugar and flavor compounds."

Matters:

“A pale crust is usually a sign that there was insufficient sugar left in the dough to support these reactions. This may be because the flour itself was deficient in the enzymes necessary to convert starch into maltose (the main sugar involved).”

WHEN EVERYTHING happens at just the right time, you get a loaf of bread with good oven spring, a pleasant crumb and a beautiful, crispy crust full of flavor.



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THE LOAF IN A BOX

IN THE NORTHERNMOST part of Spain lies the city of San Sebastián—or Donostia as it is called in Basque—a city with a picturesque shoreline that has made it a destination for tourists from all over Europe.

In the summer of 2012, from July to the end of September, the city had even more to offer.

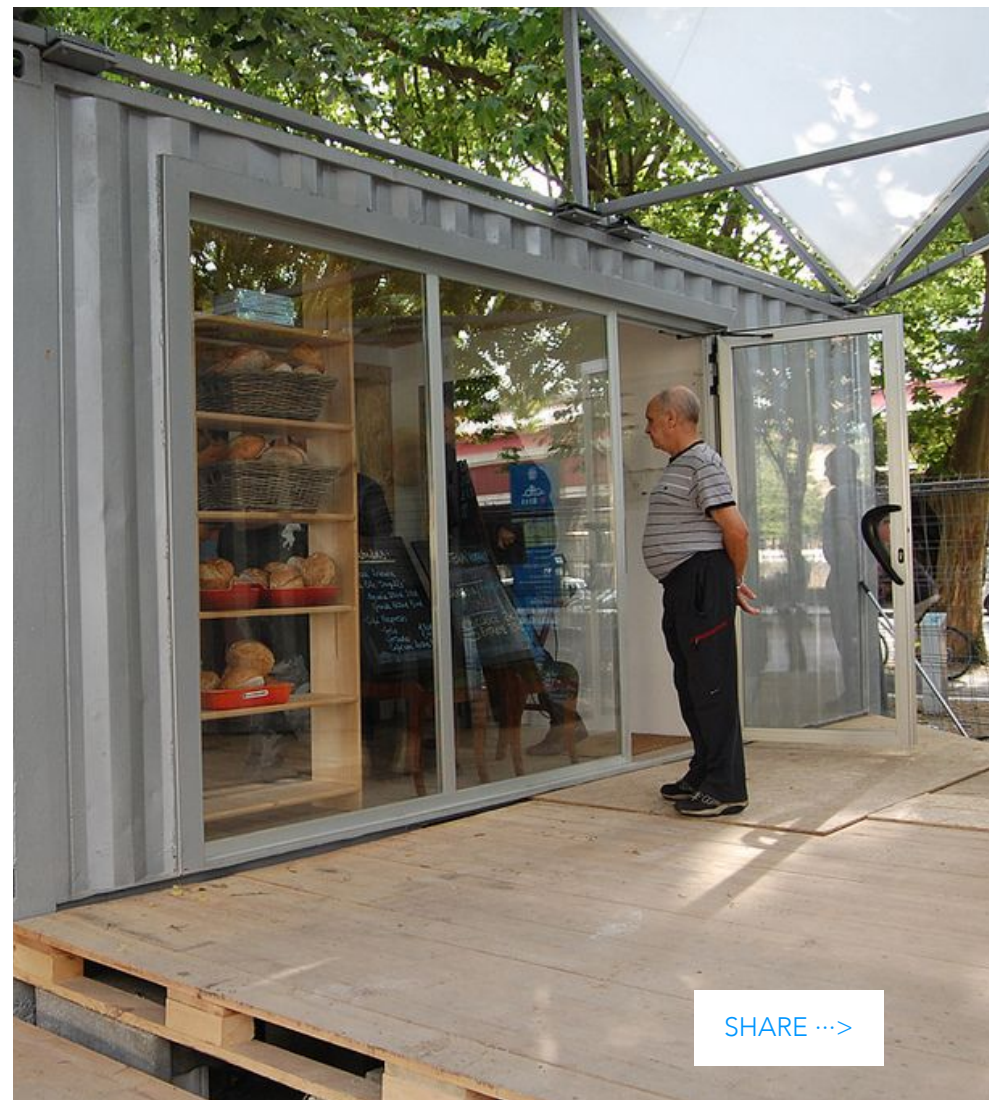
On July 1, a pop-up bakery built inside an old shipping container opened in a park at the heart of San Sebastián, bringing bakers and bread enthusiasts from around Spain together to share their thoughts and recipes.

THE BAKERY, [The Loaf—in a box](#)—, was

an idea from local communication agency, [La Salsera](#) and baker and food writer Dan Lepard (author of [The Handmade Loaf](#) and food columnist for the British newspaper Guardian), who had been toying with the idea of starting a bakery in San Sebastián for a while.

EARLY IN PLANNING the project, they involved Ibán Yarza, Lepard's good friend, journalist, self-taught baker, and passionate promoter of good bread in Spain.

Yarza has translated The Hand-made Loaf into Spanish (Hecho a mano), organizes baking courses and writes a number of blogs on bread, food and good



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living. He is also the founder of [El foro del pan](#), the most important community for home bakers in the Spanish language.

I DIDN'T HAVE a chance to visit The Loaf—in a box—in San Sebastián this summer, but as I followed the project on Facebook and Twitter, I got the impression that this project was all about good living. With bread and the bakery acting as a great excuse for bringing friends together in discussion, laughter, and eating.

This was intentional, as the bakery was created mostly for learning, with an idea of collecting ideas that could one day lead to opening a more permanent bakery.

Lepard, Yarza and La Salsera wanted it to be more than just a place for buying bread—a place for learning about bread.

I ASKED IBÁN YARZA some questions about the project and what bread means for him. Enjoy!

Jarkko: *One of your main goals with The Loaf was learning—in one of the early videos, Dan Lepard explains the vision of how you want to hear what people like about bread and what are the things that inspire people. Can you tell a bit about*

this? What were the key takeaway from the summer's bread baking? Did you learn something new about bread?

Ibán: WELL, OF COURSE we did learn a thing or two.

I would say that because of the nature of the project, people in San Sebastián (and in many senses throughout Spain) felt The Loaf—in a box—was partly their own project.

They somehow felt that it was not about Dan Lepard, or about baking a delicious and wholesome sourdough loaf, it was about sharing.

TO AN INCREDIBLE EXTENT, breadheads and even people with no previous inclination towards bread gave us their enthusiasm. The energy you could feel any day, anytime inside those containers was just unique.

It won't happen again, it was simple and pure love for bread.

I think we also learnt that people want bread, that unfortunately there's a big audience out there for good bread and many times they feel like orphans.

Jarkko: *During the summer, you had many bakers visiting you at The Loaf.*

"As I followed the project on Facebook and Twitter, I got the impression that this project was all about good living. With bread and the bakery acting as a great excuse for bringing friends together in discussion, laughter, and eating."



What was the role of visiting bakers in the project and what happened at these visits?

Ibán: THE BAKERY was indeed about baking good bread, but I'd dare to say that this was simply one third of the project.

To pick just one, Dan's main invention was the "Extreme" loaf, a bread with a tiny percentage of sourdough starter that challenges what many bakers and classic handbooks on baking say.

But beyond and above making bread, it was communicating bread what moved us.

AS A WHOLE, The Loaf has been an enormous bread campaign, and guest bakers and volunteers have been an essential part in this process.

We had the honour of showcasing Spain's finest bakers (the likes of [Anna Bellsolà](#) and [Xavier Barriga](#) among others).

They were pleased to come and see what we were doing, gave us their points of view and then flew to their hometown and spread our "mission".

And then there was the constant flow of volunteers, bakers, cooks, enthusiasts, home bakers who came to stay with us a

day, an hour, a week.

THAT FLOW of energy represents to a great extent what the bakery was about.

Jarkko: *The Loaf in a Box was closed in September and your last blog post says, "Hasta pronto." Does this mean that there will be some form of continuation to the project?*

Ibán: THE LOAF —IN A BOX— was a pop-up bakery, a one-off, it closed on 30.9.2012 and it will never open its doors again in that shape.

Having said that, a bakery in a major city of the Basque Country has always been in the mind both Dan and La Salsera (the 3 lovely lunatics behind the project).

Jarkko: *You have been very active in encouraging people to start baking their own bread in Spain. What is it about bread that gives you this passion?*

Ibán: BREAD IS DIFFERENT, it is unique, it can make you feel things you never thought about.

The sense of achievement you experience when you take a plump and crusty sourdough loaf out of your home

"They were pleased to come and see what we were doing, gave us their points of view and then flew to their hometown and spread our mission."

oven is simply unsurpassed. Cooking is great, you transform food; bread goes beyond, it makes a super hero out of you, it gives you the power of changing humble flour and water into something alive that bears no resemblance to the original ingredients.

The moment you grasp a rudimentary understanding of the basics of fermentation, your life is better: it simply is.

BESIDES, BREAD TOUCHES so many parts of life: it has to do with your memories (everyone has fond memories about bread and their parents or grandparents, or life as a child), bread seems to take us to a place of happiness inside of us; bread has to do with the most basic idea of sustenance, nutrition and deliciousness; and last but not least, home baking makes us want to share.

There is something about telling the ones around you about baking—everyone who has ever baked has felt this: You suddenly become a preacher, proselytizing and evangelizing around with a loaf in your hand!

I basically try to explain this to people, and the best way to do it is getting them baking bread.

IN A BROADER CONTEXT, in Spain bread has gone through a really dark time (in fact, we still suffer a deep crisis in the general quality of bread; surprisingly, many people complain, but almost no one seems to do anything about it).

So there's a lot to be done.

Jarkko: *What would be a typically Spanish kind of bread? If you can pick one... And as a bonus, if there is a recipe, I would love to try it and share it with my readers.*

Ibán: SPAIN HAS BEEN a country of bread for centuries.

Like in many other countries, bread has permeated the culture and the language, so there is an endless number of breads and bread-related recipes ([here's a recipe and story](#) that the lovely Johanna Kindvall illustrated last year on her beautiful blog).

IF THERE IS something like "Spanish" bread, that has to be *pan candéal*.

It is known with many names across Spain, and the variations are endless: bregado, sobado, de máquina, amacerado, español, etc.

Funnily enough, in some parts of the country, people just call it pan (bread), as



opposed to loaves with names, like baguette, ciabatta, etc.

You can find it in most parts of the country (except the North and probably Northeastern coast).

IT IS A DENSE (but not terribly heavy) loaf that uses a scant amount of water (say 40 to 45% of the flour weight), not unlike the French pain brié.

This, together with rolling and folding the dough (with in turns helps develop the dough and creates its very particular structure and white crumb) makes a good pan candéal.

A CLASSIC RECIPE could be roughly:

500 g bread flour
200-225 g water
200-300 g stiff starter (whether sourdough or yeasted ferment), same hydration as final dough (around 40-45%)
10 g salt
10 g yeast

THERE ARE a couple of key ideas for this bread:

The mixing requires a heavy hand, since the dough will be really stiff: we are talking about one of the stiffest doughs

you can handle. Knead for 10 minutes and then proceed to fold and roll with a rolling pin for another 10 minutes.

In order to avoid the development of a holey crumb, there's no bulk fermentation (or hardly any); as soon as you are done folding and rolling, you shape into a round flat loaf.

Immediately after the loaf is formed you score it (this is done now and not right before the oven, as is done commonly with most loaves). You can do a criss-cross pattern or simply create a pentagon with 5 long and deep cuts about 3 cm from the edge of the loaf.

Ferment shortly, no need to double volume. Steam the oven and bake at medium temperature (200°C) for around 40-45 minutes.

TRADITIONALLY, bakers and families would have bread stamps made up of long pins in the most varied arrays to help bread bake uniformly and also to create a signature and help identify each family's loaves in a communal oven.







OVEN HACKS

MOST PEOPLE ARE USED to thinking that bread that comes out of a home oven is dull looking, slightly flat, and can never have the lively and colorful crust of good artisan bread.

Luckily, this is more myth than reality. While baking great bread in a home oven might not be as straightforward as baking great bread in a bakery oven designed for bread making, with the help of a few hacks—or small tweaks—here and there, you can bake bread that looks and tastes just as good, if not better than a loaf bought from your local baker.

In this article, I will go through some of the most useful yet easily applicable ways to get the most out of your home oven.

Let's get started.

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Get the temperature right

ALL OVENS HAVE A SWITCH for setting the temperature.

But when you set the oven to for example 250°C (482°F), the real temperature might be something different.

Get to know your oven by measuring the temperature of the oven with an oven thermometer as you heat it up and you can adjust the temperature more accurately.

WHAT THE RIGHT TEMPERATURE for your bread is depends on the type of bread you are making, with enriched and sweet doughs requiring a lower temperature than hearth loaves that should be baked at high temperatures of about 230°C (450°F).

It is also a good idea to pre-heat the oven to a higher temperature than this, for example 260°C (500°F), before you put in the bread. This way the oven temperature won't fall too low when you put in your bread.

ANOTHER HEAT RELATED idea is to map out the heat profile of your oven.

This way, you will know if your oven heats unevenly, and can use the

information for example by rotating your bread during the baking.

Mapping the heat profile can be done quite easily by heating the oven and then placing baking tray covered with a layer of sliced white bread in the oven. After a while, when the bread has browned, take it out and see where the bread is darker and where lighter.

Use a baking stone

THE HOME OVEN is far from a stable baking environment.

Compared to a masonry oven that can maintain its heat for hours if not days, your home oven cools very quickly.

Open the door and slide in your bread and heat is lost. Put in a cool baking tray and the oven needs to heat it too. And so on.

Also, whereas a masonry oven radiates heat at a consistent pace, cooling slowly, the regular thermostat-driven home oven cools and heats intermittently: only when the thermostat notices that the temperature has gone below its pre-defined threshold, it starts heating again.

USING A GOOD baking stone will help with these issues by storing heat in the oven so that it can reheat more quickly





and thus maintain a more stable baking environment.

PICK A BAKING STONE that is thick (as thick as you can get) and has good heat retaining properties.

In many specialty stores, you will find stones designed for home oven use, sometimes labeled pizza stones. Although this is a little simplified, a good rule of thumb is to get a thick stone as it can then store more heat than a thin one.

You can also do what I did recently and buy some fire bricks from a hardware store. The bricks don't cost as much as a branded baking stone, yet give you very good results.

The only downside in this approach is that thick bricks take longer to heat than a thinner baking stone.

AFTER THIS FIRST STEP in emulating a brick oven, the next one could be adding another stone on top of the bread to distribute the heat from the oven more evenly also from the top.

And if your oven still has space left, why not be efficient and use the upper baking stone to bake a second batch of bread and double your oven's productivity.

You can think of this as your first step towards having your own bakery!

Create steam

PROBABLY THE BIGGEST problem when baking bread in a home oven is that the bread's top dries too fast and starts to form a crust before the bread has had the time to rise to full oven spring.

This leads to uncontrolled ripping but also to loaves that are not as big as they could be.

THE MOST COMMON way to get past this limitation is injecting steam into the oven.

Commercial bakeries use special ovens that can push a mighty burst of steam into the oven after the oven door has been closed. A feature that most home bakers can only dream of.

THE EASIEST way to create a some steam in the oven is to take a regular spraying bottle, fill it with water and spray water on the oven walls right after you have put the bread in.

Unfortunately, when using this method, a big portion of the steam escapes from the oven before you manage to close the door. So, when you try to create steam in

"My method is to boil the water in a tea kettle before pouring it on a heated cast iron pan. This creates lots of steam, but just like with spraying, a lot of it exits immediately through the oven door."

this way, make sure to close the door as quickly as you can.

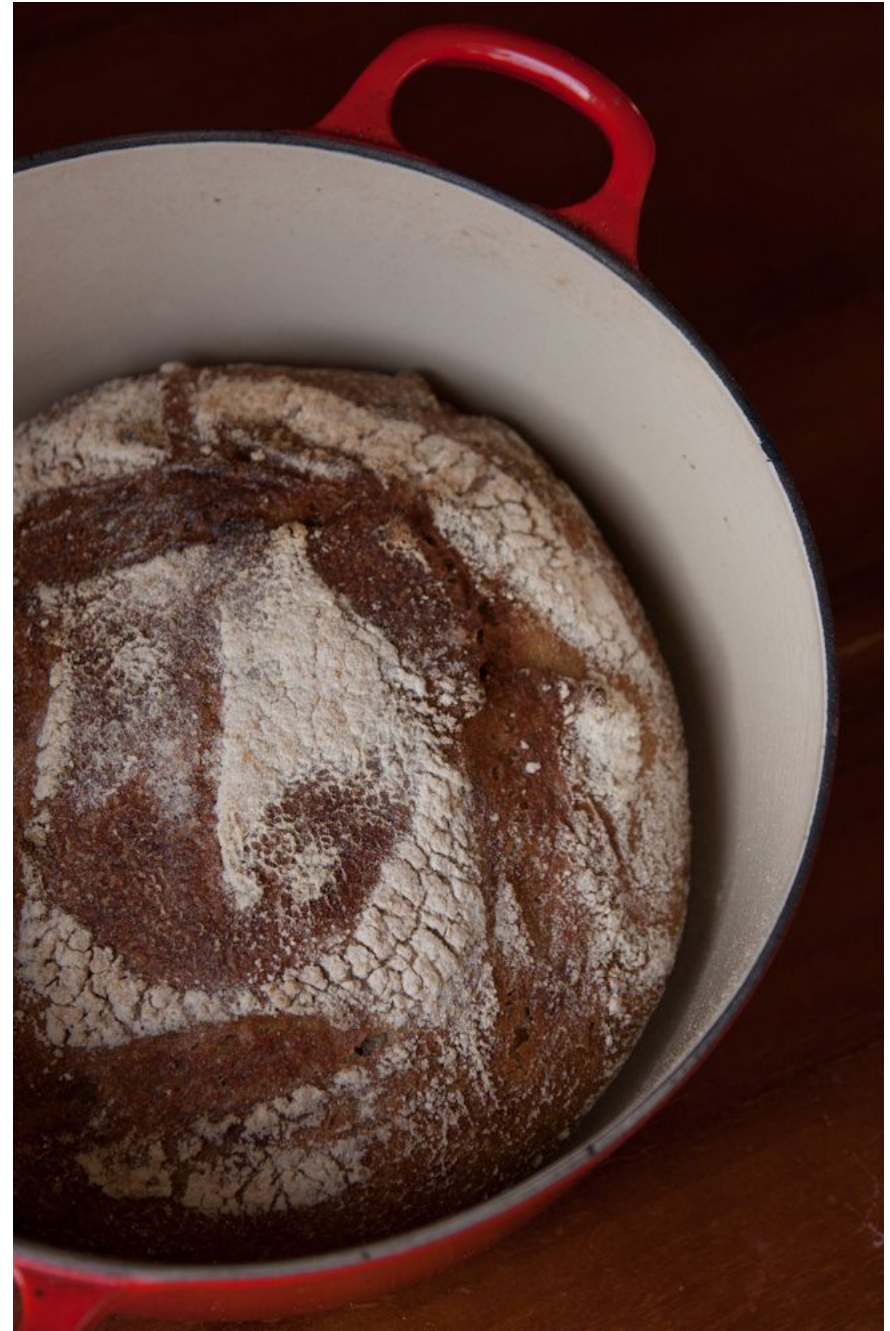
IN HIS BOOK, "[Baking Artisan Bread](#)", Cyril Hitz proposes heating an old baking tin full of metal screws at the back or bottom of the oven as the oven is heating and then placing a handful of ice cubes or cold water on top of them to create steam.

Others suggest using a metal tray or cast iron pan in the same way, with or without the pieces of metal.

I HAVE NOT TRIED using the pieces of metal suggested by Hitz, but do have some experience with the cast iron pan.

My method is to boil the water in a tea kettle before pouring it on a heated cast iron pan. This creates lots of steam, but just like with spraying, a lot of it exits immediately through the oven door.

This way to generate steam is a lot more complicated than just spraying water into the oven, and it comes with the risk of breaking your oven's window (cover it with a kitchen towel while putting the water in to keep it safe) but many people are using the method successfully and with good results.



AT ABOUT half-way into baking your bread, if there still is water left in the pan, take it out from the oven so that the crust can form and dry to its perfect, crisp, state.

When steaming with a spray bottle, you won't be able to create too much steam, so you can just leave the bread to bake all the way at once.

Use the moisture from the bread

STEAMING THE OVEN is often frustrating and can be hard to master. In fact, some bakers, like Andrew Whitley don't see any point in it.

In [Bread Matters](#), he writes: "The key requirement in this process is to keep the oven tightly closed and full of steam for 10 minutes—something that is impossible in domestic ovens. So most of the suggested methods are doomed to failure."

And after learning to use the bread's own moisture, I must agree. The results are very different from anything I have been able to get through any of my steaming efforts.

Here's how it works, again in some variations.

THE SIMPLEST EXAMPLE, and how I got started with this method, is to bake your loaf on a baking stone, covered by a clay bowl for the first 20 to 25 minutes.

There is a lot of water in the bread that becomes water vapor as it heats to boiling point, so as your bowl keeps it from escaping the oven, the bread's own moisture keeps the bread from drying out and leads to a perfect oven spring.

A SLIGHTLY MORE refined way to do this is to use a cast iron combo cooker as suggested by Chad Robertson in [Tartine Bread](#).

The combo cooker is a combination of a cast iron frying pan and a matching cast iron pot.

The bread goes into the baking pan (you should be able to slide it in with the help of a bread peel) and when the pot is placed on top of the pan, it creates the perfect sealed environment.

SIMILARILY, you could place the bread in a cast iron pot covered with a lid.

Done this way, the risk of burning yourself is just a bit higher, unless you don't preheat the pot (which apparently is a perfectly good way of making bread as well).

"There is a lot of water in the bread that becomes water vapor as it heats to boiling point, so as your bowl keeps it from escaping the oven, the bread's own moisture keeps the bread from drying out and leads to a perfect oven spring."

MY CURRENT FAVORITE approach to baking bread, as I haven't been able to find a complete combo cooker anywhere in Finland, is to use the same clay pot I first used on top of my baking stone but now placing it on top of a cast iron pan.

It works really well and consistently gives me good results. One round loaf at the time.

TRY THIS METHOD with different dishes you have at hand or find at drift stores.

People have successfully baked bread using all kinds of cast iron and clay pots such as the tahini or a Römertopf cooking pots. Let your imagination loose, and see what works for yourself.

Build a strong dough

FINALLY, it's not all about the oven.

If your dough is not strong enough to keep its shape, these oven tweaks will help but will not fix the actual problem.

So, when you make bread, make sure you knead long enough and give the dough a good sequence of stretches and folds during the rest period.

This way, when you place a loaf of bread in your tweaked oven, you can be sure that it's going to become a great loaf of fresh, baked bread.



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BAKER ON A MISSION

I FIRST FOUND Tom Baker through "[The Starter](#)", a short film in which he talks about bread, sourdough, and his business. At the time, he was running his business in his home, teaching cookery courses and baking bread in a cob oven he had built on his back yard.

There was something profound about the way he talked about bread making, and I was curious to learn more.

TOM BAKER runs [Loaf Social Enterprise](#) (*Loaf for short*), a UK business based in Birmingham devoted to "promoting real food and healthy living, and building community through food," as Baker explains on the business's web site.

For Loaf, this means baking and selling bread as well as teaching cooking and bread making courses. The business, which was started in Baker's home in 2009

moved to a space of its own in September 2012 when it opened on Stirchley High Street.

The street used to be a thriving place to shop, work, and live but has been ignored and declining for the past thirty years, which is exactly why Loaf wanted to be there. As a social enterprise, the business aims to build the community and improve the quality of life of its customers through business instead of focusing on just making more money.

I ASKED Tom Baker a few questions about his business and his ideas on bread and social responsibility.

—

Jarkko: *You describe Loaf as a social enterprise that "aims to generate profit*





"I got great satisfaction from handing them a warm loaf of bread and knowing them by first name—not only them but often their kids and their pets too!"

through providing various services, in order to further its social objectives through campaigns and food projects." You also describe it as a "community bakery." Can you tell a bit more about the philosophy behind Loaf? Why did you start Loaf as a social enterprise instead of just a regular business, and how do you advance your social goal through the business?

Tom: BEFORE LAUNCHING Loaf, I worked for 5 years as a nutritionist in the National Health Service.

I used to travel around Birmingham, one of the UK's most culturally diverse cities, and work with communities across the city, both rich and poor. This exposed me to the huge inequalities that exist in the UK, so when I launched Loaf I knew I didn't want to ignore this, but for Loaf to be a food business that attempted to reach all sectors of society.

So I set Loaf up as a social enterprise business, which meant that the company would have a double bottom line—on the one hand to become financially sustainable and profitable, but on the other to use its resources and its profit to further a social objective: "To promote good food and healthy living in

communities, and build community through food."

THE COMMUNITY BAKERY was really a natural progression of this: to build community through food.

I asked people to "subscribe" to a bread club for a minimum of 4 weeks (later 12 weeks), and so every week the same people would come to my house on a Friday afternoon and buy bread. We quickly became a kind of community and I got great satisfaction from handing them a warm loaf of bread and knowing them by first name—not only them but often their kids and their pets too!

Jarkko: *Do you think the decision to make Loaf a social business has affected the day-to-day operations in your business, compared to how it would have been to run it as a "normal" business?*

Tom: NO. Many Social Enterprises in the UK focus a huge amount on the "social" and not enough on the "enterprise", and end up being dependent on grants to grow and develop and fulfill their objectives.

I had come out of a culture of grant-dependency in the NHS and I was

determined to raise capital another way so that we could fulfill our objectives our own way and not on anyone else's terms. This meant for me the "enterprise" coming first, though not being pure enterprise but trying also to fulfill social aims too.

If the "enterprise" could be made successful then the social objectives could be self-funded and fulfilled.

Therefore, right from the beginning, Loaf has operated just like a normal business and tried to become sustainable first and turn a profit.

Jarkko: *You started Loaf in your home, with a wood fired oven in your backyard and a starter in your fridge. Can you tell a bit about how you got started with your business and how it functioned at that time?*

Tom: I WAS FORTUNATE in that my boss at the NHS allowed me to reduce my hours to 4 days a week so that I could work on Loaf part-time.

In November 2009, I started teaching people how to make bread and pasta from my home kitchen on the weekends, and it proved popular taking a surprising number of bookings through our website.

That same month I went to a bread

SOCIAL ENTERPRISE

SOCIAL ENTERPRISE—or social business, as Nobel Peace Prize Laureate Muhammad Yunus calls the idea in his work—is a model for businesses built for social objectives.

Social enterprises differ from traditional businesses in an important way: Even though traditional business might have social objectives, the social objectives come second, only after maximizing shareholder value. A social enterprise doesn't aim for profit but the profits are put back to improving the business and advancing its social objectives.

SOCIAL ENTERPRISE also differs from non-profits and government organizations in an important way: A social enterprise does business to support its social objectives, selling goods and services to customers and competing in the same markets with traditional businesses.

This way, a social enterprise can function without outside funding while staying true to its social goals.



conference in Oxford and had the fortune to sit between Tom Herbert of [Hobbs House Bakery](#) (and “The Fabulous Baker Brothers” TV series), and Dan and Johanna McTiernan of the [Handmade Bakery](#) in Yorkshire, the UK’s first Community Supported Bakery.

After some inspiring talks during the conference and a few beers in the bar afterwards with Dan and Johanna, I was convinced that I needed to start a bakery from home also. On the train home that night, I plotted my exit from the NHS altogether and a week later had handed in my notice.

I STARTED A WEEKLY RITUAL of making heaps of sourdough dough late on a Thursday night and lighting up my wood fired earth oven just outside the back door early on a Friday morning to bake for the newly formed bread club.

Alongside this I expanded the courses to sourdough baking, foraging, butchery, and preserving—all taught from my kitchen to six people at time, in my small two bedroom terraced house in South Birmingham.

Jarkko: *And on September 8, 2012, you opened a “real” shop. How did that*

happen and what was involved in getting the bakery up and running? I imagine it was a lot of work...

Tom: LOAF WAS FAIRLY SUCCESSFUL right from the start so it became apparent early on that we would eventually need to move to bigger premises.

In early 2011, we started looking at our local neighborhood for potential places to have our own shop—a high street cookery school and bakery. We opted for my most local high street in Stirchley because I had become involved in some local projects there (such as launching a monthly community market), and it was a high street in desperate need of regeneration with the highest shop vacancy rate in Birmingham.

We believed that we could be part of the regeneration of the area by putting our business on the high street.

AFTER LOOKING for a suitable premises for a few months but not coming up with anything in budget on the right scale, I was approached by the MD of a large regional brewery called Everards, who had heard about me through Chris Young at the [Real Bread Campaign](#).

He explained that although they were

still a beer brewery, they were also a property company and owned many pubs and retail premises across the region. He explained that they were starting a new project called Project Artisan which would be a property investment scheme that would seek to find artisan food producers that were in need of premises to expand into. They would then refurbish a suitable property for them and take on the "artisan" as a tenant.

I showed them round a property that we had previously rejected as too expensive and after a few weeks of discussions decided that they would buy the property, which went through in late 2011. In May 2012 the refurbishment began, and was completed in early September 2012.

THE REMAINING ISSUE for us was raising the capital for buying equipment for our bakery and cookery school.

For this we borrowed another idea from The Handmade Bakery and issued "Bread Bonds" to the local community. 25 people agreed to lend us £1000 for 3 years, in return for an interest rate that we pay to them in bread rather than in cash. This enabled us to buy all the equipment we needed.

Jarkko: *You run the new bakery in a space you share with Stirchley Stores—which isn't your regular grocery store either. How did you come in contact with them and what is the role of this cooperation in your business? Do you see community bakeries and stores (working together) as something that will become more popular in the future?*

Tom: **STIRCHLEY STORES** is a local food cooperative that I am a member of.

They were running out of a house also and operated as a monthly buying group to obtain affordable ethical food from a wholesaler for its members. They were also outgrowing the house they were based in, so Loaf offered them the opportunity to run the retail space of the new HQ. We "rent" the space to Stirchley Stores for no money, in return for selling on our bread at no markup. Therefore we don't have to employ extra staff to run a shop to sell the bread, and they get a place to sell their food direct to the public too.

I had seen a similar thing at the Handmade Bakery, where they shared some space with a community grocery shop, and I don't see why it can't work elsewhere too.

COMMUNITY SUPPORTED BAKING

COMMUNITY SUPPORTED BAKING is a [Real Bread Campaign initiative](#) aiming to divide the risks and rewards of starting a bakery between the baker and his community.

This could mean selling bread subscriptions and issuing bread bonds as Tom Baker did when starting Loaf, but there are other ways to collect funds and help from the community as well.

Some other ideas implemented by community supported bakeries so far have been apprenticeship and volunteering, and other kinds of trading schemes.

THE IDEA TO start a community bakery can also come from the potential customers: people looking for real bread can start a cooperative and hire a baker to bake them the bread they need.

But whatever the implementation, the goal is the same: to produce bread in a way that benefits everyone involved: the baker, his suppliers, and the community.

Jarkko: As this issue of Bread is about ovens and heat, I want to ask a few questions about that topic too... In your new bakery, do you have a wood fired oven as well as before, or did you go with a more "standard" bakery oven this time?

Tom: UNFORTUNATELY, we don't have any outside space at the new premises so I couldn't rebuild an earth oven on site.

Commercial wood fired ovens are way out of our price range so we opted for an old refurbished Tom Chandley deck oven, for now...

Jarkko: What difference do you think the oven makes in the bread making process? Is there a real difference if you compare a wood-fired oven and other types of ovens?

Tom: I HAVEN'T BAKED in any wood-fired ovens except for my small earth oven at home.

The bread can be incredible out of that, but it is highly unpredictable and inconsistent, so it takes a huge amount of skill to judge the temperature and conditions correctly and to time the proving of the bread exactly to get the perfect loaf from an earth oven. I probably



"I love time alone in the bakery, striving to get great crust and crumb from simple ingredients and techniques, but I also love seeing the transformation in people who come on our courses, and sending them away with a new skill and an armful of warm bread!"

had some of the best bread I've eaten out of the earth oven, but I couldn't reproduce it every week.

I think ovens make a huge difference to the finished loaf.

I chose a low-crown deck oven deliberately to improve the crust of our breads and we crank it up nice and hot for exactly the same reason.

Jarkko: *Teaching people bread making has been a big part of what you do since the beginning. Why did you decide to include it in your business instead of just selling bread?*

Tom: I DID SOME SUMS on that train on the way back from Oxford after the bread conference, and baking from home, there's no way I could ever have afforded to leave my job if it had just been selling bread, there's just no profit to made from bread at that scale.

Plus I really enjoyed teaching. It's what I did for the NHS, and what I had set up Loaf to do. The Cookery School came first, the bakery was a drunken after-thought

Now that we're in the shop, the bakery and the cookery school are on a much more even-footing financially as our bread-baking capacity has increased at

least ten-fold compared to baking at home.

Both are important to me—I love time alone in the bakery, striving to get great crust and crumb from simple ingredients and techniques, but I also love seeing the transformation in people who come on our courses, and sending them away with a new skill and an armful of warm bread!

Jarkko: *What do you see in the future for Loaf?*

Tom: I WANT LOAF TO continue to contribute to the regeneration of Stirchley by doing what it has set out to do in the new premises: make good bread (and food generally) more accessible to the local community, and teach forgotten food skills.

In the long term I would love Loaf to perhaps take on some land on the edge of Birmingham, so we can help to connect city and country by getting city-dwellers out there growing vegetables, rearing animals, and learning rural skills.

I think our high streets are in desperate need of regeneration and real bread bakeries are starting to prove that they can be a big part of this all across the UK.

THE RECIPE

100% WHEAT FLOUR
(BREAD / ALL-PURPOSE)

70% WATER

2% SALT

2% FRESH YEAST

BREAD FOR CHRISTMAS

THE TRADITIONAL CHRISTMAS bread in Finland is a sweet loaf made with bread flour, syrup, fennel, aniseeds, maybe a couple of other spices, and powdered malted rye.

The bread is very soft and hardly has a crust. In fact, it is often glazed with syrup and butter at the end of baking to give a shiny finish.

It's a tradition, but that kind of bread has never been one of my favorites.

THIS IS WHY THIS YEAR, as Christmas was drawing closer, I started experimenting with a version of my own. It would have all the characteristics that would allow me to call it a Christmas loaf but in a lighter, less sweet form.

Put it this way, I wanted my version to taste more like bread.

I had some powdered malted rye in my



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flour closet, so I decided to give it a shot and made a standard bread dough with some of the flour replaced with malt. With just this small change, the bread started to have the right Christmas feel.

TO SUPPORT the flavor a bit more, I decided to go with a poolish starter made using a very dark ale. This bread needs to be soft and quite fluffy, so I didn't use a sourdough starter this time.

Finally, the spices, and some fruit. For fruit, I picked currants (any raisins should be fine) which I soaked in some good rum for a few hours before using them. As one of my friends suggested after tasting the bread, dried cranberries would be a very good fit as well.

An overnight retardation of the finished

loaf gives the flavors time to build up and results in a flavorful and rustic loaf for Christmas. Sweet, but only slightly. Earthy and still very much a bread.

IF YOU ARE LOOKING for something to bake this Christmas, this is a rather quick recipe to try.

And if you are reading this only after Christmas, this loaf tastes good on a cold winter night even after the festivities are over.

The Recipe

3 TO 5 HOURS before making the dough, mix the poolish and put the raisins to soak in rum.

You can also do this the night before, if you let your poolish develop in the

refrigerator or in a cool room instead of the kitchen counter.

FOR THE POOLISH, mix:

125 g dark ale

125 g strong white flour

5 g fresh yeast

IN ANOTHER BOWL, mix 50 grams of raisins (I used currants) and 2 tablespoons of good dark rum.

At this point, you can also mix the flour, water and spices from the final dough in a separate bowl and let the mixture sit at room temperature, well covered, in autolyse for the 3 to 5 hours your poolish takes to become all bubbly and well fermented.

This will make the gluten in the flour

better prepared for your kneading, but is a completely optional step when making bread with this recipe (I tried with and without the autolyse and got good results both ways).

FOR THE FINAL DOUGH, mix:

All of the poolish

150 g powdered malted rye

650 g strong white flour

5 g aniseed, ground (~ 2 teaspoons)

4 g fennel seeds, ground (~ 2 teaspoons)

3 teaspoons bitter orange peel, ground

500 g water

15 g salt

5 g fresh yeast

100 g syrup

All of the raisins and rum

MIX EVERYTHING except salt and raisins in a bowl and stir until there are no dry lumps of flour left. Then work the dough (I prefer to do this on the table rather than in the bowl) until it is smooth and elastic—about 10 minutes.

When the dough starts to feel ready, work in the salt and keep working the dough for a while. Finally, when the dough is ready, fold in the soaked raisins and form the dough into a ball.

Place the dough in a lightly floured

bowl for bulk fermentation.

After about half an hour, take the dough out of the bowl for a simple stretch and fold sequence. In its easiest form, all you need to do is to form the dough into a tight ball again, by stretching one corner of the dough at a time and tightly placing it in the center of the dough ball.

When the ball is ready, place it back in the bowl for another half an hour. Repeat the stretch and fold and rest the dough for an additional 30-40 minutes, or until the dough is ready.

DIVIDE THE DOUGH in two pieces of equal size and shape both pieces into breads of your liking. I decided to go with boules myself, but there are no rules against different shapes either.

Leave the shaped loaves for a final rest either in room temperature or overnight in the refrigerator and bake in a hot oven (230°C or 450°F) on a baking stone or in a combo cooker or dutch oven for about 35 minutes.

Let the bread cool, and enjoy with butter and ham, or as a part of a traditional Finnish Christmas dinner.





**INSANELY INTERESTED IS A
PUBLISHER OF MICRO
MAGAZINES FOR THE CURIOUS.**

MICRO MAGAZINES ARE magazines that focus on a very specific topic, published online by a very small team—in the case of Insanely Interested, just one man: me.

I am Jarkko Laine, a stay-at-home dad, online writer and publisher, beginner cigar box guitar player, and an all-round creative guy from Finland.

I believe that as humans, we are born curious and need to keep learning about many different things to enjoy our lives to the fullest and to give our minds the food they need. Insanely Interested is here to deliver a part of that healthy diet for a curious brain.

MY LOVE FOR A DARK CURST ON A soft white crumb combined with a need to find out how things are made lead me to

create the magazine you are now reading.

IN ADDITION TO BREAD, Insanely Interested publishes an email newsletter for those of us hoping to turn their minds insanely interested in everything into a meaningful change in the world—by creating important work and sharing it with the world.

The newsletter is called [Curious&Creative](#) and you can subscribe to it for free at the [Insanely Interested web site](#).

SLOWLY, AS I KEEP LEARNING more about the way online publishing works, I am building Insanely Interested into a sustainable, long-lasting business that can serve the world by presenting new ideas and stories from people doing things they believe in.

Having you with me on this journey makes me happy.





THE NO [SHARE ...>](#)
PLAN OVEN



BEAUTIFUL THINGS SOMETIMES get built out of ignorance.

In the summer of 2012, my three brothers and I gathered for our yearly brother bonding weekend at our parents' tiny summer cottage in the Finnish countryside—with a vague idea that we would probably make something.

Because that's what we do when we get together with no distraction.

We debate big ideas (ranging from world economics to whether telepathy could be possible or not—I'm usually the skeptic), we eat well, and we make things.

EARLIER IN THE YEAR, I had been leafing through my copy of [The Bread Builders](#), but had never got into any level of detail in studying how wood fired brick ovens actually work. All I knew was that we couldn't build one in the mere two days we had at our disposal, and that the oven works by storing a lot of heat into its masonry and then releases it slowly so that it can be used for baking the bread.

Definitely not enough for building a real oven. But enough to get started at building something.

THERE IS A FOOD here in Finland that we call *rosvopaisti* (literally, robber's roast),





apparently of Mongolian origins. The food is made by cooking meat in a pit covered with coals, soil and heated stones.

I have never eaten or made *rosvopaisti*, but in my mind, I combined this idea with that of the masonry ovens and thought that baking bread in a hole in the ground would be an interesting idea to try.

When I explained this idea to the boys, they didn't resist. In fact, they were mostly excited. Jetro suggested that we should make a movie out of the experiment—and [so we did](#).

WITH NOTHING but this overall idea in mind, we got to work. Who needs plans, after all?

We picked a spot near the lake so that we would have access to water if something went wrong—it was a place where we had been keeping a fire before—and started digging.

Unfortunately, what we didn't consider was that being right next to the lake meant that after not much digging, we reached the water level. There was no point in digging deeper so it was time for our first quick change of mind.

Instead of digging any deeper, we started collecting rocks for the hearth and walls of the oven. We covered the bottom

of the hole, its walls, and then started to build a dome around the so called oven.

Which is when one of us—I can't recall whose idea it was—got the idea: "let's light the fire."

THE NEXT THING we realize is that we are building an oven with the fire already burning!

Things like this happen when you have no plan.

That's the beauty of it. If you ask me.

WHILE WE STRUGGLED to finish building the oven, my two loaves were resting in their proving baskets, waiting to be baked as soon as everything was ready.

And—surprisingly enough—we managed to build a simple dome by placing a big rock on top of the hole, and kept heating the oven for a couple of hours.

As the fire turned into embers, we shoveled the coals out and put the first loaf in. Smelling the dough as it started baking on the hot hearth was one of the most rewarding moments of this entire year!

We didn't have a door for the oven so we took an old wheelbarrow that was lying nearby and placed it on top of the oven.

"Breaking bread baked in an oven we had spent all day building brought us closer together, giving us memories that we can look back to still years from now."



Again, not the best choice, and the next weekend, with all of our families with us, we improved on the oven by adding more rocks and fitting a big stone as the oven door.

But for the first firing, all we had was the slowly rusting wheelbarrow.

It did the job.

45 MINUTES LATER, when we opened the door, we found a well-baked loaf of bread. It wasn't one of my best loaves, but it clearly was a real loaf of sourdough bread. That was all we had hoped. Maybe more than we had hoped, even.

And the loaves we baked on the next

weekend after the improvements were just as good as anything I have baked in my home oven.

IF THERE IS ANY moral to this little story, it's in the joy of building simple things.

Breaking bread baked in an oven we had spent all day building brought us closer together, giving us memories that we can look back to still years from now.

And it made me remember that making bread really is not quite as complicated as we sometimes make it seem.

That said, however, next time we will start with proper research...



YEAR TWO

BREAD TURNS ONE in a matter of days!

What started as an experiment in publishing has turned into something bigger, and I'm glad to tell you that *there will be a second year.*

IN 2013, starting from February 20th, I am going to publish 6 issues of Bread, each packed with inspiring interviews, new ideas, and thorough articles on bread making. Like this year—just a little bit better.

The goal of helping and inspiring you as you practice the craft of bread making will also still be at the core of the magazine just as profoundly as it has been this year.

In other words: 2012 was exciting but 2013 will be even more exciting. And I can't wait to get it started.

MOVING TO YEAR TWO also brings a big change. A change I wrestled with for a long time before finally deciding to take the jump and just do it.

Insanely Interested is my business, and Bread is my most important work.

And to get it to the next level which I believe it deserves, it needs money. That's why, after a lot of thinking, I have decided that as much as I have enjoyed sharing the magazine for free, it's time to bring the era of complete free issues of Bread to an end.

I HOPE you understand the decision and maybe even consider [subscribing](#) for a second year of Bread (more about this on the next page). But I also understand if you are not ready to spend money on the magazine—not everyone is.

And that's fine: I love free content just as much as the next guy, and will keep trying to bring free content of the highest quality content to you next year as well, through other outlets such as [Facebook](#) or the magazine's [web site](#).

NO MATTER what you choose to do, you are a hero: your devotion to bread and baking will make a difference for you and the people around you. That I am sure of.

I want to say a huge thank you for 2012.

It has been a pleasure baking with you!

In 2013, I am going to publish 6 issues of Bread, packed with inspiring interviews, new ideas, and thorough articles on bread making. Like this year—just a little bit better.

SUBSCRIPTION OPTIONS

IF YOU WANT TO keep enjoying BREAD in 2013, you have a number of good options to choose from:

1. [Subscribe today.](#)

This is your cheapest option if you decided to subscribe for 2013:

Subscribe **before January 20** and take advantage of a 15% discount on the yearly subscription. This is my way to say thank you for your support—it really means the world to me.

[Click here to read more.](#)

2. [Don't do anything yet.](#)

If you are not sure about whether you want to subscribe or not yet, no worries.

Keep your free subscription and I will let you know when the next issue of Bread

comes out in February.

Bread will not be sold as individual issues, but if you come on board later, you will get all the previous issues from 2013 as an instant download the moment you subscribe.

3. [Follow Bread on the web.](#)

Even if I am no longer able to keep the magazine free, I still really like free content. This means that it is a good idea to keep an eye on Bread [on the web](#) and on [Facebook](#) so you won't miss any free content I might put out on 2013.

I have some ideas that I would love to share with you...

ANY OPTION is fine. So, feel free to pick the one that suits you best. See you in 2013!



ISSUE 5

THE NEXT ISSUE of Bread comes out on February 20th.

It will have a focus on the bakery, featuring bakers such as Jeremy Shapiro who in his spare time runs a tiny bakery in his home in New York and Jason Raducha who opened a micro bakery with the help of a successful Kickstarter campaign.

TO MAKE SURE you get your copy when it's published, [visit our web site](#) and check the subscription options.



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