A DIALOGUE
WITH GLASS
ABSTRACT

Finnish glass industry is going through turbulence with factories closing down and schools being uncertain of their future. Now is the time for collaboration.

Our thesis started with filming in the village of Nuutajärvi for 12 days over the period of 3 months capturing over 50 hours of film. After that we engaged glass not just as designers but also as facilitators; using methods based on chance operations, score and our own intuition we discovered different ways of using moulds and invented games to push the students to blow outside their glass bubble. We explored, experimented and captured the process. This resulted in pieces of glass with unique processes behind them showing the marks of the moulds, makers and mistakes.

The collaborative and participatory approach brought us closer to the people working within the industry. We got new friends, new ideas and new opportunities.

LANGUAGE:
English

KEYWORDS:
Exploration, Collaboration, Glass, Tacit Knowledge, Intuition, Tools, Craft, Maker, Performance, Score, Design, Avant garde, Studio Glass, Arts and Craft,
MANIFESTO

THIS BOOK IS DONE BY ANNA AND KRISTOS. TOGETHER.
THIS BOOK IS AN EXPLORATION.
THIS BOOK IS AN EXAMPLE.

THIS BOOK IS ABOUT COLLABORATION.
THIS BOOK IS ABOUT INTUITION.
THIS BOOK IS ABOUT INTERDISCIPLINARY.

THIS BOOK IS ABOUT DESIGN. OUR DESIGN.
THIS BOOK IS ABOUT ART. PERFORMANCE ART.
THIS BOOK IS ABOUT CRAFT. GLASS CRAFT.

THIS BOOK IS ABOUT US. OUR WAY OF WORKING.

THIS BOOK’S ILLUSTRATIONS ARE BY KRISTOS.
THIS BOOK’S GRAPHIC DESIGN IS BY ANNA.
THIS BOOK’S PICTURES ARE TAKEN BY US. EXCEPT THE NUMBERED ONES.

THIS BOOK HAS DIALOGUES.
THIS BOOK IS A DIALOGUE.
WITH GLASS.
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21.5.2013

We are sitting on a sunny terrace enjoying our sodas and talking with Marika Kinnunen. She is one of the teachers of the glass school in Nuutajärvi, the oldest still functioning glass village in Finland. We are showing Marika a sketch of a glass project we would like to make together with her students. At some point of the conversation she mentions about the plans to shut down the iittala factory, the place where Oiva Toikka's birds are born. This dull rectangular building with its wavy metal façade is looking towards us on the other side of the village's main road. The beat of the hot furnaces is creating a loud hum, but occasionally fragments of some distantly recognizable radio songs can be heard through the noise. This massive grey box was built as replacement for the old factory building, which is now housing the school and other independent studios.

The discussion goes back to our project idea and Marika starts to be more excited about it. But that excitement is shadowed by the fact that also the glass school is experiencing turbulence, as she explains; for the coming school year no new students are allowed to be taken in and the continuation of the school is in jeopardy. At that moment we decide to come the next time to Nuutajärvi with a film camera instead of drawings...

Kristos: We went... when was it... In June I guess to Nuutajärvi.
We felt back then that it was not glass that was too “perfect” but what designers did was too perfect. You could see more the handprint of the designer than the handprint of the blower in the piece.

Anna: It’s true we wanted to somehow...

K: We wanted to bring out the...

A: Blower in the story...

K: The blower, yes. We were talking even how to create a framework... a physical framework... if you think about a mould... that would be the framework. And different blowers could work with the mould. And we could in the end see the different handwriting of different blowers.

A: Hmm...

K: Students would be blowing it... and then maybe the professionals and the factory workers. So not only studio glass makers... And then we could reflect on that and compare the results.

How would the factory workers react on this kind of frame we had created?

A: What was then the shifting point? Was it our meeting at Nuutajärvi or maybe when we met Kaisa?

K: But then when we met Marika in June when we were presenting this first idea, the collaboration with the school as a starting point. Then we already talked about showing it at a museum.

A: Kaisa mentioned that things are changing... The factory is closing down and the negotiations are ending.

K: Did we know about the school then?
A: No
K: That was then when we met again at the end of the summer.
K: Something happened in between...
A: What happened?
K: You have had always this feeling you wanted to do a film.
A: I know...
K: So maybe that was pushing a bit from your side...
A: Maybe meeting with Toni (changed things)?
K: But then we were already talking about filming... Not?
A: Yeah... At least that was what we wanted to do. But I know that before we went to Toni you were not that convinced about the movie...
K: But what did you want to film, why did you want to do this?
A: I wanted to capture the last moments in Nuutajärvi.
K: So you saw this, maybe from a reporter side of the thing...
A: Yes this might be valuable information 20 years from now...
I just think that it is a small snowball that keeps on getting bigger (the movie)
K: that’s the whole thing, things are changing and keep on adding up it’s hard now actually...
A: But why are we now not able to tell in 20 minutes what we are doing?
K: I think because we don’t know what we are doing, in the end. We are documenting that for sure. But I think for both of us it does not seem to be enough.
And also we don’t know were it is going. We are maybe waiting for somebody to tell us please can you do it from this point of view, can you do maybe this. And also we are maybe afraid and not wanting to take it to certain level or avoiding Fiskars.

K: Maybe we can’t really find a focus point. And also we have so much footage already and we have fallen in love with some of them.

A: I think we have too much to be explained in 20 minutes. If we would explain everything it would at least take 1 and a half hour.

K: And also it could that we need someone to say “you should still interview this person and then you just drop some others.” You have to kill your darlings and kill your interviewees.

A: So tomorrow, I mean Tuesday, we show the current status of Nuutajärvi, the history and why we are doing this.

K: You have to be careful now in what words you put it.

A: I mean if we reflect on what we just saw in this movie. This IKEA movie. It is not the current status of Finnish glass.

K: Hmm

A: Yeah, it’s hard this...
INTRODUCTION
DISCOVERING HUMAN

It is well known how much humans shape the Earth; we burn down forests for making soil for agriculture, we tame animals to serve our purposes and stomachs, we build houses and cities to protect us. Our tendency to build things, to create something, is a great part of our nature. It is like he evolutionary development of humans stopped just before our bodies would have adapted to some special function or environment. But our brains and hands are further developed than with other animals making it possible for us to make things in order to adapt to almost any environment. We build complex machines and systems to support our way of living, and we create art to bring beauty to our lives – and to question our being.

HOMO WHAT?
French philosopher Henri Bergson talks about our creative behaviour in his book Creative Evolution (1911) stating that our intelligence is “the faculty of manufacturing artificial objects, especially tools to make tools”. In this occasion he actually replaces the term Homo sapiens with Homo faber (Man the maker), which is also used later by Richard Sennett (p. 21). It is tempting to replace the term Homo faber with Homo conficiens, which roughly means the Man the Creator or the creative man. The Latin word conficiens can also mean effective, productive or life-giving, thus the term Homo conficiens hides a deeper meaning hinting at humans’ pursuit of creating things and even life, like we would be Nature or God itself! But is our act of creating merely just a way to not control but to understand life?

Bergson sees human, the intellect, being characterized by an inability to comprehend life; the high intelligence restricts us to fully understand life because intelligence treats everything mechanically and instinct proceeds organically – and instinct has been overruled by intelligence, only a hint of it lingering somewhere in our body. Instinct is something that is needed in order to survive and to perform vital tasks, to be able to live. Intelligence, on the other hand, gives humans the ability to think and to reflect. We have a consciousness and self-awareness, meaning that we can observe ourselves isolated from the world, questioning our being – which has perhaps led to our detachment of the natural world.

“A different evolution might have led to a humanity either more intellectual still or more intuitive. In the humanity of which we are a part, intuition is, in fact, almost completely sacrificed to intellect.”

Henri Bergson

The intellect, Bergson says, is skillful in dealing with the inert (non-living) matter but “is awkward the moment it touches the living.” So in a simplified way we humans are better in dealing with inanimate, solid materials than with living creatures and plants. At least this philosophy fits the industrialized, consuming human or what could be called Homo consumers, Man the Consumer. What we believe fits all humans is our ability to take advantage of our natural environment and to use it for our own purposes, to consume it. And what better serves the act of consuming than the act of producing. But humans do not only produce for the sake of consuming; when creating art we are not producing food or artefacts to be consumed but are serving our intellectual needs, trying to find answers to our questions or to just create questions.

MARKS OF A MAN

Through art we are trying to understand our world but we also leave a mark from ourselves – we are saying to others: “I was here!” When visiting the closest public toilet and checking out the art inside the booths you can witness this phenomenon. Almost all our actions leave a mark, whether making art or just eating a hamburger – it can be conscious or unconscious, with a clear purpose or just for the fun of it. But especially in arts, sports, entertainment and politics the individual can rise above others and have a bigger impact on things, leave a bigger mark – the popularity of art schools and reality TV shows, not to mention social media, only support this argument. We just want somebody (preferably millions) to know we are here and that we have done something – we want to be seen and accepted. Our tendency or obsession of leaving a mark of ourselves is evident also in a more negative context: the environmental impact an individual’s lifestyle has on our planet is referred to as the carbon footprint. So do not worry, you will most likely leave a mark wanted or not.

We, however, want to emphasize the mark of a human. It can be obviously said that the industrialization and mass production have taken us even further from the nature creating another ecosystem where almost only we humans manage to live in. The objects manufactured by soulless machines are of perfect quality without any aesthetic mistakes. The Arts and Craft movement (p. 33) attacked against the simple and monotonic objects produced by machines making way for 20th century designers who tried to create new, beautiful, unique designs. But still it was that same soulless machine that made the products; and designer’s task is to bring soul to an inanimate object, to give life to it – conficiens, life giving.

Like discussed, humans are dealing better with non-living things than with living, but paradoxically we want the non-living things, the manufactured objects to have a “life”. Another paradox is that humans want to leave a mark but in manufactured objects the mark of a human is often considered a fault. What can be seen as the only mark of a human is the design of the object but there is no evidence of human interaction in the final product – this is of course totally understandable if a human has not been part of the manufacturing process. We argue that people want to see and are used to seeing flawless objects, and machines certainly can perform better than humans in making them. If there is a “mistake” in a product we tend to think it is because of a human has done it – or a human has failed to fix it. For many that is a sign of lack of concentration or skill, in other words it is a fault, a fault we want to erase. But that is exactly what we want to bring out: the fault or let us say the trace of a human touch in an inanimate object.

Seeing and consuming mainly industrially manufactured, mass produced objects we humans have become so used to their sleekness and artificialness that handmade objects might suddenly look clumsy, cheap and even ugly in our eyes – although they are usually more expensive making it even harder for us to purchase one.
CAPTURING THE HUMAN TOUCH

Although this thesis is not about designing or producing series of glass objects, we are trying to explore the possibilities of our ideas and philosophies through glass. For us, glass represents many things—like is clarified in Part III in this book—but from all the traditional materials especially glass has the potential of capturing the traces of a human, the maker. Even though glass is mainly used for utility objects and produced in factories its properties make it to stand out from other materials; during the manufacturing process glass transforms from a liquid to a solid state in a manner that allows the man or the machine to manipulate it in multiple ways. But more interestingly, the process of moulding and manipulating glass leaves its mark on it—either through purpose or mistake. Even the smallest interference on the hot glass will have an effect.

In this thesis, we are exploring the possibilities of showing the human touch in a manufactured object by collaborating with the maker, the glassblower, in new ways. Although we talk about crafts we do not mean “handicrafts”; for us, crafts represent the manufacturing of a well-designed concept by the skilful hands of a master craftsman.

Our past experiences have convinced us of the power of collaboration and more over the collaboration between different disciplines. In particular, the experiences at the Theatre Academy (Helsinki) have made us trust in our intuition. An undeniable factor that is evident in both performing and glass blowing is the use of the body. For us, that is a clear link between these two otherwise different disciplines; and in our work, we are trying to take advantage of that link by bringing methods used in the theatre world to the noisy and hot glass studio.

When you want to search for new ways of doing glass, it might be helpful to discard the traditional methods and step outside the (glass) bubble. In dance, for example, "the choreography process may employ improvisation for the purpose of developing innovative movement ideas." Can this philosophy be implemented to glass blowing process and through it find, not innovative movement ideas, but innovative ideas for new glass pieces or methods of doing glass?

Through this thesis, we are also questioning our own role as designers; what can a designer be in the contemporary world and what roles can a designer take in a collaborative project where different people with different skills and backgrounds encounter? In our exploration the Nuutajärvi glass village acts as the focal point, as the test platform. The village and the whole glass industry in Finland is going through big changes. We are also questioning with our own work can a designer have a positive and progressive contribution (i.e. a mark) to the development of the field of glass making.

Our exploratory work is characterized by two philosophies, which have been mentioned in the course of this introduction: collaboration and intuition (tacit knowledge). Many of the influential examples mentioned in this thesis have somehow collaborative, interdisciplinary or intuitive aspects and involve creative, experimental people who try to push the boundaries of their own field.

1 Bergson, H. (1911) p. 139.
2. A. E. Bergson, in (1911) p. 165.
PART I
THE FRAMEWORK
“We’re in this together” stands for that when you start something together you finish it together. This is how we feel about our thesis. Collaborating is a human behaviour. It starts when we are little kids, building a hut is easier and way nicer to do with your friend than alone. Together you can play games and if there are even more kids you can make teams and compete. It is part of our nature that we want and enjoy to be in groups. Our nature is also such that we prefer being with those we like, those who are similar and who understand each other. We cannot, though, always choose who to play with; at work and in school you might have to team up with those who think different and work different, even those you dislike. Then it comes up to your social skills to cope with such situation – so that you are able to connect well with those who differ from you. What is actually a “social skill” and how do you learn these? And why is design nowadays called so often social design? It is really simple; a social skill is a human quality to interact with others and you learn these skills during your upbringing and at school. So “social design” refers to interaction which refers to designing together and designing for others.

In the book Together (2013) Richard Sennett emphasises on the importance of working together. Together is the second out of three books of his “homo faber project”. Sennett is mostly interested in how different types of people get along with each other; those who differ from each other, for example in social class, origin and/or religion. When our modern society is getting more complex and diverse and pushing us to more interactions in different environments, we have to learn to get along with people we might not like or just do not understand. This results in “complex cooperation” in which Sennett emphasises on the (social) skills needed to cooperate.

To be able to have a successful collaboration there has to be mutual respect and trust. Only if the process is open and thoughts are shared can there be fruitful outcomes. But also this does not happen by snapping the fingers, it might take time and effort to reach that level where the participants feel comfortable enough to share their skills and knowledge.

K: What is on your mind?
A: I’m thinking what to do. We have to present our project in two days to the students of the Design Academy in Eindhoven, the Netherlands and I have no idea of what to say! What are we actually doing...

I think we have to mention that at the moment it is quite difficult to work together with glassblowers. Glassblowers are designers themselves.

K: It feels like it is this secret thing that somebody has found a good blower – apparently they are so rare. These things should be shared...

A: And there are so many glassblowers who have money problems. Collaboration can bring opportunities moneysize.

K: But then again these are so complex issues... we should just talk about “why” and we should be more poetic than too factual, you know.

A: That’s what we wanted in the beginning. Where is the poetry now?

K: In the movie?
A: No, in our thoughts.

What do you think, what should we show? We should also not forget that they don’t know anything about Nuudajärvi and glass.

K: And they haven’t seen the footage 20 times like we have.
A: We should also not forget that if we go too wild they don’t necessarily understand what we are talking about.

K: Do you think that they know what ittala is?
TACIT KNOWLEDGE
HIDDEN DIMENSION

For an outside observer moulding hot glass into recognizable object or drawing a harmonious shape might look simple and easy. But if that observer were to try to do the same he would most likely fail. And if that same observer were to ask the blowor or the designer how they did it most likely the answer would be "I cannot explain it." This knowledge that is crucial for performing certain actions but is hard to describe can be called tacit knowledge. The term was coined by Michael Polanyi and is also called craft knowledge in the field of crafts or bodily knowledge in the field of performance and dance. In his book Tacit Dimension Polanyi famously states that "we can know more than we can tell"* referring to the hidden knowledge we humans have. With this statement Polanyi also refers to our ability to see something that is hidden, like a problem that is yet to be discovered⁴.

Common words describing tacit knowledge would be "gut feeling", "intuition" or "hunch" – the feeling of knowing something without being able to rationalize it. Tacit knowledge is a form of knowledge that cannot be described or recorder accurately. As easy and basic walking seems to us we cannot describe how we exactly perform it; it is impossible to explain what muscles are used and in which order, tempo and force for being able to create motion. And if we start thinking about the action and going through all the steps of the process of walking, we cannot perform it smoothly – it just comes automatically without the need of thinking about it. Despite being a basic thing learning to walk doesn’t happen instantly but needs months of trial and error.

Now one might ask: what if a child grows in an environment where no one walks or talks will the child ever learn these skills? Perhaps not. But some fundamental skills like walking and grabbing objects have been evolved already so many thousands of years ago that they are encoded in our genes, in our muscles and bones. These skills or “preferences” are part our body’s “basic protective mechanism” that are present already at birth, like Donald A. Norman puts it in his book Emotional Design⁵. A human only needs a trigger to start knowledge, skills or attitude – it becomes difficult. Then it can easily become an expensive hobby. Maybe combining own things with commissioned work, like Janne said in his interview...

It’s extremely expensive to educate a few bachelors, especially if they don’t get employed after their studies... Same in our school.

K: The curricula should reflect on what is actually happening and what is needed. And I think this is where collaboration can step in... There are many designers who would like to work with skilled craftsmen but they don’t know how to approach them. Together you can do it.

A: I think we have to ask the (glassblowing) students what they are planning to do after school.

K: And why.

A: Are they going to study further or not. So what did they study before, now and where do they see themselves after school. So we can make an infographic about this.

We can do a same kind of infographic about the Aalto students; what did they do in their masters, in which field did they graduate? I don’t know why there are no bells ringing.

K: I understand that from the industry there is a need for glassblowers, but we can’t always rely on the industry. The industry is nowadays based on where it is cheap to manufacture, what is beneficial for the brand and where it is easy to distribute. If Fiskars is the only industry we rely on now in Finland of course we can’t have three schools educating glass blowers – if we try to educate the students for the industry.

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1 Bennett, M. (2012) p. 5

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using the skills – for example a threat or treat can be one. And in this sense we might say that these “survival” skills gathered through time do not disappear as easy as newly discovered skills, skills that are not crucial for our survival. We could call these skills – like writing, painting, singing or glassblowing – “secondary” skills. Still a trigger, we believe, is needed to preserve these secondary skills. It might come from another person who already possesses a skill or from a non-human trigger, like an object or material (in the field of crafts). A trigger is thus something that makes the person intrigued to acquire a certain skill – it is like an inspiration, a spark.

However, the trigger alone is not enough to maintain and distribute a skill. But also the persons obtaining the skills are required. In essence these secondary skills, the ones that are not rooted in our system, are more fragile and easily lost. That’s where the communal part of tacit knowledge comes in; for a skill or knowledge to survive it has to be used and transferred to new users who again maintain it and distribute it to the next users. Because tacit knowledge is something that cannot be accurately explained or recorded the skills has to be performed to the observer who then tries to imitate it and eventually learns it and maybe, after years of practice, masters it. This demands for collaboration between the persons working in a field where specific skills are needed and used: if there is no interaction and sharing between the individuals the body of knowledge becomes “atomized”, residing only within the boundaries of the individuals’ body and mind. The performer has to be willing to share his skills and knowledge as much as the observer has to be open for absorbing and learning them.

Tacit knowledge is like a data bank inside one’s mind and body. Also designers are full of this kind of tacit knowledge that they cannot describe. The skills and ideas a designer possesses have been gained through personal experiences and external impulses. If this tacit data cannot be explicitly recorded in a form of a book or film the only way to access it is through sharing and participation. This is why we strongly believe that a successful collaboration happens in a shared space where both participants engage in the creating process sharing their knowledge and ideas.

The smaller industry maybe, individual studios and groups, is the one they (glass students) are going to work in. Then it’s weird that Aalto is producing a contradictory “students”: they are not glassblowers, they are not glassmakers, they are designers who understand glass but maybe they are too in it. They also seem to be wanting it to alone. Maybe a glassblower wants that the designer understands the material but Aalto is doing a bit more than that, maybe too much. They are not any more designers who know about glass... but they become glass designers who want to do it themselves.

A: A student (from Design Academy) was asking me yesterday: "why do we learn so many different types of crafts at the school?” It feels that we are somewhere in between craft and design. At the Design Academy they are not fully going for the craft but they want all the students to understand the process. There are really intensive courses on wood, metal, plastic, textile, and ceramics. The students don’t become carpenters or craftsmen but they understand all the possibilities from every corner, they understand the materials.

K: It’s good that they test and explore themselves. It’s not that you go to the wood studio and learn from A to B how to make a chair; you have to really experiment what you can do with the wood or metal or textile etc. Like Martin from our wood workshop he always likes to see something different being done.

A: But some schools also sees, theatre, filming and storyboard drawing as crafts that you have to learn in the first year, not to forget all the computer programs.

Michael Polanyi

WE CAN KNOW MORE THAN WE CAN TELL
A GOAL-DIRECTED PROBLEM-SOLVING ACTIVITY
L. Bruce Archer

THE PERFORMING OF A VERY COMPLICATED ACT OF FAITH
J. Christopher Jones

THE IMAGINATIVE JUMP FROM PRESENT FACTS TO FUTURE POSSIBILITIES
J. K. Page

DESIGN IS TO DESIGN A DESIGN TO PRODUCE A DESIGN
John Heskett

DESIGN IS EVERYTHING. EVERYTHING!
Paul Rand

GOOD DESIGN IS GOOD BUSINESS
Thomas J. Watson Jr

DESIGN?
IT’S OK, EVERYBODY DOES IT

Design. A word that is twisted, chewed, puked out and again chewed to such a deformed state that it feels impossible to make sense out of it. And if you try to do that you inevitably end up giving it new meanings. But we take this as a possibility to give “design” our own meaning and we do that by answering the fundamental question “what is the role of a designer?”

That is a question that travels almost daily through our minds, and a question every designer should answer him or herself according to Alice Rawsthorn, writer of the recently published book World Design. Nowadays you can study design on any level, from social to spatial design and from service to sustainable design – and more and more new departments are popping up like mushrooms on a rainy day. All these different studies offer their own design methods, philosophies and approaches, preparing you to become a creative mind that thinks out of the box and can work as an expert on almost any field, despite the apparent specialisation.

The role of a designer already changed during the period we have been studying design. When we started our previous design studies bright future scenarios were sketched for designers. Only less than ten years from that the scenarios are not so bright anymore. Many of our classmates did not get a job as designers and some of them had the will to start their own company. Also the education itself has changed during our studies; the focus has moved from product and material orientated approaches towards conceptual and immaterial approaches. Now design studies are moving towards social, multidisciplinary and collaborative approaches. Of course the changes going on in our world – cultural, social, economical, ecological and technological – have been affecting the direction design and design education is taking. School’s react on the outside world and its up to us, the students, to keep up to the speed of changes. The education gives us tools, methods and knowledge but all of them might be out-dated the day you receive your diploma. In the end it comes down to your own personal motivation to develop yourself also outside the school doors.

A: What is the role of a designer in your eyes?
K: Hmm... I am one, so what is my role? I think the role of a designer is to help to improve existing conditions.
A: To locate errors? Would it also be your role to locate them?
K: Could be. But to distinguish an error is not that simple. I mean what is an error?
A: Good question.
K: I guess we should – like you have said before - trust more our intuitions on that matter. You know, you just feel when something is not right. It is a universal thing but some people are more sensitive in smelling these things... errors, faults, mistakes, things that don’t work...
A: I think there is not a job offer saying: “We seek for a designer who uses his / her smell and intuition.”
K: Ha-ha!
A: Let’s take your mom as an example: how would you explain our profession to her?
K: Well, that’s the thing. It would be easy if I would stick to the “traditional” designing, like “I design cups and plates, mobile phones, cars etc.”
A: But we are not...
K: But there are new ways of designing nowadays. And, you know, also designing a car or mobile phone can refer to the designing of the engine or interior of the car or the user interface of the phone...
A: But how do you see our role then in this thesis as facilitators?
It seems that the question “what is the role of the designer” cannot be answered that easily. Because of the big variety on design studies and design fields there is no clear answer on the matter. Listening to Victor Papanek does not necessarily help, but there is a truth in his famous quote “everybody is a designer” implying that it is in our nature to design. What then makes one a “real” designer is perhaps the attitude and the passion one has; it is the decision of making designing a profession. We do think that as a designer you learn certain skills and methods in school – giving you the means to become a professional – but how these are transferred to and used in the working life is up to the designer him- / herself. As much as one can decide being a designer one can also decide which role to take as a designer.

Asking yourself critical questions like “why” “what” and “for whom” is part of being a designer. You can choose to be more aware of the outside world and focus on social projects or create your individual projects in your studio. The scale can be big or small, local or global – it is up to you. But who are we in this thesis and in our work or moreover what is our role as designers in this project? We see ourselves as facilitators, designers who are searching for new methods for collaboration on the borders of the design field, creating a sort of a platform for others (and us) to design in and get inspiration from. Because companies are not anymore approaching designers with problems to be solved designers have to find the problems themselves. So perhaps we are also explorers as well as facilitators trying to discover that hidden problem like Michael Polanyi (p. 23) would put it. And perhaps facilitation is a way to reveal those problems.

K: Maybe, if I would do this alone, I would be designing by drawing cups and plates and car exteriors...
A: You should use your drawing skills more often.
K: I know. That can be a side job then. Funny thing is that this whole thesis is so complex that we can have several roles in it.
A: I think we are all the time changing roles, so we cannot explain in one sentence what we do.

But yes who are we in the end... we have our skills and tools and the methods we learnt at school but still we have problems with writing down what our role is.

K: But fundamentally I think we are trying to trigger a change to better and create awareness.
And then comes someone asking: “How can you say what is better or not?”
A: Can we earn money with that?
K: Earn money? No.
A: I mean after school. No more study money, only our set of skills and our attitude towards the world.

K: Some ex-director of IBM said that design is good business. I think design is an attitude. Who said that by the way?
A: We talked about this yesterday night. Was it in the Hello World book you were reading?
K: Yeah but who said that? Victor Papanek?
A: Yes and Fluxus of course. They also see themselves as an attitude.
K: Can you make a living with an attitude?

APPLIED ART AND DESIGN

The applied arts are, according to the definition of The Oxford Dictionary of Art, “the application of design and decoration to everyday objects to make them aesthetically pleasing.” From the narrowest perspective this means adding aesthetics (shape and colour) to industrially manufactured objects. We like to, though, stretch the boundaries a bit and interpret the word art more freely.

According to our department’s (Applied Art and Design) study guide the emphasis is on product development and experimentation but also on reflection of one’s works in “a wider cultural context.” The study guide also states that the design projects relate to everyday living, functional objects and unique pieces. Both the definition of applied arts in The Oxford Dictionary of Art and the description of Applied Art and Design in our school’s study guide imply that the field of applied arts is object orientated and fairly superficial – at least compared to contemporary industrial design which is a descendant of the applied arts. This object orientated and superficial design is evident in the projects we have done during our studies. They have been more traditional design projects, following the so-called design-by-drawing process and focusing on the object itself and its material and aesthetics. We might say that Applied Art and Design as a program or an approach is more materialistic and closer to the traditional design than for example industrial design which nowadays includes such sub-fields of design as service design, strategic design, user experience design, system design, experience design, creative sustainability etc.

But there is more to the program than it seems. Like its name suggests, it has a connection to the world of art. Also the study guide’s description mentions “the reflection of one’s work in a wider cultural context” which demands the students to be reflective and critical of their work. The study program also allows students to experiment and to create unique objects. These two factors make way for more artistic process where the student can move more freely – without necessarily corresponding to the demands of industries, users or clients – reflecting on the environment and cultural context and developing own individual style and designer persona. The outcome of a project can be purely functional but also purely artistic. Many
students of the program do have a tendency to become more artistic designers creating their own style and own line of products, even own companies. In this sense the program of Applied Art and Design resembles the Design Academy whose graduates are known for their individual, almost artistic style – though a shift in this has already taken place like explained in the previous chapter.

Another thing besides the materialism that differentiates Applied Art and Design from its neighbour Industrial Design is the aforementioned individualism. Whereas projects coming from the Industrial Design department and that branch of design are fundamentally more collaborative by nature, the projects done in the field of Applied Art and Design – or Product Design – are more individual. In the realm of industrial design a fair amount of the projects take place in a complex environment where many designers and experts from different fields are needed to tackle the problem. In the realm of Product Design or Applied Art and Design, where the nature of the projects is different, students work mostly independently creating their own works. This is of course the general impression and exceptions do exist – like us. But still there is not much of collaboration between departments, disciplines or students whatsoever.

Arts and Craft movement, Bauhaus and Constructivism had made their contribution to the discourse at the time and were promoting the union between arts, crafts and industry. “artists” started to appear in the factories in the early 20th century and industrial products started have their own, designed look. This was and still is, we feel, the basis for the program of Applied Art and Design. Although the type of design practiced in the field of applied arts is moving somewhere between the worlds of arts, crafts and industry it has traditionally been leaning more heavily towards the industry – maybe because that is where the money is. Perhaps this is why there are somewhat old fashioned patterns visible in the field: many designers are still creating (or try to create) stylized, beautiful everyday products for the industry.

But there is a new phenomena emerging: companies and factories are not providing anymore in-house positions for designers in the same way as they used to which forces designers to create their own positions and own practices. This is not necessarily a negative shift but might actually produce some new collaborations between
designers and small, local manufacturers. Working for big industries might be a safer and more stable option but working with small producers offers more freedom and flexibility. Another phenomenon relating to industries and products is the shift from material to immaterial; because of some big changes in our modern society like economic crisis, growing energy costs and environmental issues designers have started to react differently on physical products. More critical, sustainable products have emerged together with new fields of design focusing on immaterial things such as services, experiences and social projects.

Humans will probably be creating objects as long as we are on this (or any other) planet because that is our nature, but in design world the emphasis has moved from creating products to creating experiences or solving social issues. Our world has become more complex making the problems to be solved also more complex expanding the field where designers can have an impact on things. The bad news is, though, that there are no jobs on the market for these new types of designers, or even for the traditional designers whatsoever. The conclusion would be that designers have to “create their own context” where to work in, like Henrik Jan Grievink from Next Nature put it in the panel discussion held at the Design Academy Eindhoven in November 2013.

ARTS AND CRAFT MOVEMENT

It feels quite unbelievable that still today, 150 years after the dawn of the Arts and Craft movement, we talk about the consequences of the industry and mass production. It is like we humans suffer from short term memory loss lacking the exact same issues the generations before us did, never truly solving them and only end up repeating the same patterns.

The social, economical and cultural circumstances in the eighteenth and nineteenth-century Britain and the inspirational writings of John Ruskin and Augustus Pugin gave rise to the Arts and Craft movement. Highly talented designer William Morris was the most important figure of the first wave of the movement giving, together with his friend and colleagues, tangible form to Arts and Crafts concerns; the abstract ideas transformed to objects, people and places 1. The movement was opposing the working conditions in the industry, the impoverishment of the craft and debasement of decorative arts - in this sense the movement can be understood as anti-industrial. It was promoting craftsmanship and beautiful and useful objects created in an enjoyable environment, believing that the circumstances a product is created in affect the end result.

Although Arts and Craft movement laid the foundation for later movements such as Art Nouveau, De Stijl and Bauhaus – the latter one still echoing in the applied arts – it did not survive the First World Ward. The rapid urbanism nor the technology. Maybe its noble but paradoxical ideologies already set its future. Rosalind Bakesley points out three main paradoxes of the movement in her book The Arts and Crafts Movement; the first is the democratic impulse versus the patronage of the upper middle classes, second is the conflict between the support of handicraft and the vilification of the machine and the final paradox concerns the notion of integrated labour, insisting the craftsman to realize his own designs 2. As can be understood, these paradoxes were never solved and despite Morris and others becoming successful designers the movement itself slowly faded away.

But now there is a sense revivalism in the air: designers and consumers alike are turning again to the crafts and local production is slowly challenging the global industries. Is it only a trend or a real change in attitudes that cannot be answered yet but at least we two are promoting this silent and hardly visible movement - though the same paradoxes that haunted the Arts and Crafts movement still prevail today.

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1, 2 Makeijis, R. (2006) p. 28-29
EXPERIENCING SPACE

Thanks to the Space and Action module we have been twice as students at the Theatre Academy in Helsinki (TEAK). These experiences have strongly influenced our perception of our working methods and ultimately this thesis project. The Space and Action module, organized by Toni Kaupilla with the help of Riku Saastamoinen included an intense three-week workshop at TEAK. Spatial design students (and us too) together with theatre and dance pedagogy students were working on short tasks related to mistakes, misuse, errors and failures – and of course space and movement. The three weeks were full time work with a morning programme, a lunch break and an afternoon programme; one task could be only ten minutes but another could be two hours and often the tasks were evolving and reused during the course of the workshop. After the work day students were allowed to use the theatre space, the black box, for homework (which we also had) or just for relaxing and exercising. The outcomes of a task were presented for the whole group usually the next day by photos, text, movie or performances. Every morning, before starting to do the tasks, a one-hour bodily practice was led by Leena Rouhiainen. The purpose of the practice was to listen to the body and to open it up through different exercises.

The second time we ended up in TEAK was because the students, who we had been working with, invited us to participate in their project that was actually a continuation to the workshop. But this time it was not a three-week workshop but rather a three-month “exchange”. Instead of being spatial or any designer whatsoever we were taken in as performers; from the moment we walked in to the theatre space we were seen being part of the performance group and we were as much dancers or actors as the other ones were, and they were as much designers as we were. This meant that we even had to perform on a real stage for a real audience – and the audience had to even pay to see us! The director did not categorize anybody in the group; it was one big team comprising of individual skills and characteristics.

Our experience at TEAK was far from the nowadays “designing with computer” mentality. Instead of drawing or modelling there were philosophical discussions and reflection; the ideas, experiences and emotions were shared with the whole group. During both of the times spent at TEAK we were free to explore and to make mistakes. There was no problem to be solved or no object to be designed; the only problem was usually you, your own blocks and prejudices.

Of course this is only one perspective of how a performance project can be like, but it is an extremely inspirational one. There is not only some new knowledge or skills gained but also new types of persons are met who possess different knowledge and skills that can be helpful in later projects. Still, perhaps the most important thing to be absorbed from this kind of experience is the fruitful collaboration between people from different disciplines.

A: Actually we did not even touch the computer for three months.
K: Yeah, true!
A: It seems that when you are focused on he computer you forget yourself. It is so weird that people design with this huge tool, the machine. Who knows everything...
K: ...and does everything for you... soon they will have this database of all possible shapes and colours and materials and the computer calculates what is good design!
Anna: No emotion.
Kristo: Nope.
A: Where is the poetry?
K: ... and the human? I hope our thesis will be more human... more poetic...
EXPERIENCING GLASS

Our first joint venture in the world of glass was about designing a juice bottle for a local manufacturer together with a fellow designer. The prototyping resulted in a simple shape of a mould-blown bottle that was dipped into melted glass creating an interesting and organic effect on the bottle's bottom part. It resembled partly a hilly or icy landscape and partly (quite literally) a semi-melted or metamorphosed bottle. After successful tests we took the mould to a professional glassblowing studio.

Whereas tests made at school are relatively cheap glass piece blown by a professional can be extremely expensive. But what struck us more than the price was the outcome of the bottles, where the bottles we made at school had a natural and even clumsy outlook the ones crafted by a professional had a more clean and sterile feeling. The process used was exactly the same and the blower was a professional but the outcome was quite different and in the end not satisfying. The maker was different. The handprint was different.

Quality is rarely an issue when working with a craftsman but it is the personality of the craftsman that can become one. From a social and collaborative point of view the craftsman and the designer have to match in their personalities to make it work, so to say. But when an actual human being is making the object using his / her own body and mind it is almost inevitable to not see that person's touch in the outcome. It can be barely visible but for example with such a responsive material as glass the touch can have a great impact on the product. And then the question is does a certain touch, a personality, fit the designer's taste or the design itself.

We continued working with glass some months before starting on our thesis. This time we were only doing tests for ourselves and tried to explore the possibilities of glass (within the boundaries of our school's workshop). The irregularity, or uniqueness of a glass piece was still a driving force in our tests like in the juice bottle project. Again we were using a fixed bottle shape that was mould-blown, but instead of dipping it we tried to manipulate the bottle using simple wooden tools we had made. Now it was not only the blower whose touch could be seen in the piece but also we could leave our mark on it. This dialogue between regular and irregular, forced and free is for us a great source of inspiration.
PART II
THE RAW MATERIAL
BREAKING BOUNDARIES
INFLUENTIAL PEOPLE AND PHILOSOPHIES

You will never discover something new if you are not willing to discard the old. Throughout
the history new innovations, ideas, movements and revolutions have started from the wish
to change the status quo. The examples shown in this part are about people and attitudes
that have pushed the boundaries of their fields and through that adding something “to
chew on” to the discourse.

An interesting notion is that many of the examples, including Studio Glass movement (p.
104), have taken place in the 1960’s and 70’s. Those decades proved to be extremely
influential in the fields of art, design and crafts.
THE BAUHAUS STAGE SHOP

In 1923 Oskar Schlemmer became head of the Bauhaus stage shop and attracted students from all departments and workshops from the Bauhaus school to join his vision on theatre.

Oskar Schlemmer’s stage shop was an experimental stage where the students were working on Schlemmer’s concept: Man in Space. Not only using their design skills but their whole body as a tool for exploration. The famous three-part Triadic Ballet from 1912 was executed in cooperation with the dance team Albert Burkh and Elsa Hotzel and the master craftsman Carl Schlemmer. The abstract of the Triadic ballet consists out of three colours: first the Yellow series, second the Rose series and third the Black series. The colours are the only common factor in the ballet, which starts in a humanistic style on a yellow stage and ends more seriously on a black stage. 12 different dances and 18 different costumes are seen on the stage, danced by three dancers, two male and one female. Because the Bauhaus theatre was not following the rules of the “normal” theatre plays and operas of the time the designers had no external restrictions, at the Bauhaus stage they were free to explore themselves and focus on their own imagination and creations following Oscar’s philosophy “man in space”.

Even more interesting is that Oscar Schlemmer was open to receive students from different backgrounds. This opened students up to experiment in a different level outside of their own fields. Lus Feiniger one of Oscar Schlemmer’s students emphasises on the intuitive way of working with no clear goal. Together with students from outside of the theatre field Oscar created many unconventional theatre pieces, which has inspired many school, designers and artists still now. For example Oscar Schlemmer’s Stiick dance and The Triadic ballet.

“At an early age I had occupied myself intensely with the making of masks in various materials, I hardly could say why, yet sensing dimly that in this form of creation a meaning lay hidden for me. On the Bauhaus stage, these intuitions seemed to acquire body and life.”

1. Lus Feiniger, one of Schlemmer’s students

AVANT-GARDE MOVEMENT

The avant-garde comes from the French word “advance guard” or “vanguard”, literally “fore-guard” and refers to people or works that are experimental or innovative particular in the fields of art, culture and politics.

“Questioning convention is the orthodoxy of the avant-garde.”
Peter Doggett

Marcel Duchamp, John Cage, Merce Cunningham, Joseph Beuys, Piet Mondrian, Salvador Dali, Allan Kaprow, Henry Moore, Yoko Ono, Pablo Picasso, Le Corbusier, Walter Gropius, Rem Koolhaas, Iannis Xenakis, Björk, Pina Bausch, Kenneth Anger, David Lynch, Eero Saarinen and Robert Wilson are a very small collection of artists listed as avant-garde artists – many of them being our favourite ones. This shows that many artists from different fields aligned themselves with the avant-garde movement and secondly it shows that the movement is an ongoing one, even today. Avant-garde artist are usually considered as those who are in front of the main stream “artists” and could be, in our eyes, called also trend-setters of a sort or inspirer. Their work is labelled by risk-taking and experimentation and is often happening on such an extreme or intellectual level that “the common” people have hard time to approach or appreciate it. Therefore it takes always some time before the elements of their work filter through the societal layers and become part of popular culture.

FLUXUS can be seen as an Avant-garde movement whose members present their sometimes-radical performances in the form of a manifesto.

Avant-garde also refers to the opening of Salon des Refusés in Paris (“exhibition of rejects”), organized by those painters who’s works were rejected for the famous “Paris Salon” (1748-1890). Paris Salon was the most important curated by a jury exhibition of the 17th century. It was actually the only exhibition held during that time. A first prize would mean that success was guaranteed. Winners were even given commissions by the French government. In 1863 Salon the Refusés opened his doors, after two third of the painting being rejected for the Paris Salon. Artist protested and Napoleon III decided that the art would be shown in an other part of Paris. The show got thousand visitors a day those visitors were mainly laughing, at many nowadays famous paintings that have been shown in Salon the Refusés.

FLUXUS

“Founded by George Maciunas the FLUXUS Movement is an international network of artists, composers and designers noted for blending different artistic media and disciplines in the 1960s and 1970s”

Although FLUXUS has been compared to Dada and some aspects of Pop Art, their own ideology sees themselves as “an attitude” and not a movement or style. FLUXUS is most famous for their manifestos from the 60s and 70s performed in Europe and North America including the cities Paris, Copenhagen, Amsterdam, London and New York. With their provocative performances FLUXUS opened up the boundaries between art, life and the society, and explored the fields in between them. People from different disciplines using different media became (and still are) part of FLUXUS: writers, printmakers, composers, poetry writers, sculptors, artists, musicians, authors, pianists, ethnologists, painters, performance artists, critic and curators, teachers, visual and sound poetry makers, installation artist, theorist, multi-media artists, generalist, producers, vocalist, educators, music theorist, song-writers, music theorist, music educator, visual artists, filmmakers, architects, action poets, anti-art activist, photographers, chemist and graphic artists.

The art works created by FLUXUS members were simple and resonated “do-it-yourself” aesthetics. They were meant to be banal and sometimes even blasphemous but fore mostly they were critical works; founder of the group George Maciunas used a series of small events in the form of manifestos like concerts, performances and exhibitions to open up the discussion of what art can be. Other FLUXUS artists active already in the 60s and 70s include Joseph Beuys, John Cage, Yoko Ono, Dick Higgins, Nam June Paik, and Georg Brecht.

The FLUXUS Performance workbook, a 60 page book including 500 events written by 42 different participants, can be downloaded and printed for free and is still used in theatre and art schools as a performance method. One of the methods shown in the book and one that FLUXUS members frequently used is writing a score (see p. 162) - a method also used by John Cage.

Many of the manifestos performed by FLUXUS were extreme and at that time shocking – true to its avant-garde label. The reactions of the media shows how some of FLUXUS's works were perceived at that time: the score written by Philip Corner named Piano activities (1962) was shown on German TV with the line “The lunatics have escaped!” and was broadcast 4 times. In this score members of the FLUXUS work group demolished an actual piano in front of the audience (p. 50).

1. Fluxus. Wikipedia. Viewed on 28-12-2013


PIANO SUITE FOR DAVID TUDOR AND JOHN CAGE
(ANY NUMBER OF PERSONS MAY PARTICIPATE IN ONE OR MORE OF THE MOVEMENTS)
1. . . . . . . CAREFULLY DISASSEMBLE A PIANO.
DO NOT BREAK ANY PARTS OR SEPARATE PARTS JOINED BY GLUING OR WELDING
(UNLESS WELDING APPARATUS & EXPERIENCED WELDER ARE AVAILABLE FOR THE 2ND MOVEMENT). ALL PARTS CUT OR CAST OR FORGED AS ONE PIECE MUST REMAIN AS ONE PIECE.
2. . . . . . . CAREFULLY REASSEMBLE THE PIANO
3. . . . . . . TUNE THE PIANO
4. . . . . . . PLAY SOMETHING

7 April 1963 The Bronx, Jackson Mac Low, Fluxus Workbook

LAUNDRY PIECE
IN ENTERTAINING YOUR GUESTS, BRING OUT YOUR LAUNDRY OF THE DAY AND EXPLAIN TO THEM ABOUT EACH ITEM. HOW AND WHEN IT BECAME DIRTY AND WHY, ETC.

1963, Yoko Ono, Fluxus Workbook

LIGHTING PIECE
LIGHT A MATCH AND WATCH IT TILL IT GOES OUT.

1959, Yoko Ono, Fluxus Workbook

SCORES FROM FLUXUS WORKBOOK
FLUXUSWORKBOOK.COM DELUXE. VIEWED ON 4.11.2013
JOHN CAGE & MERCE CUNNINGHAM

One of the post war avant-garde leading artists is John Cage who reinvented the musical composition by creating a chance-controlled (aleatoric) system that allowed random compositions. This system is built on the I Ching, an ancient Chinese book on changing methods, and it remained his standard composition tool till the end of his life. 1

John Cage has worked during his life mostly with his partner Merce Cunningham who is seen as one of the most important choreographers and modern dancers of this time. These two men worked together two find new innovations in their fields by pushing the boundaries and turning their backs against traditional approaches. Many of their works are based on the chance operations where they did not follow the rules of theatre, music and dance but let chance create the musical score or choreography.

Cage and Cunningham also created a procedure where music and dance became independent from one another but happened simultaneously in the same space. This can be seen in one of their early collaborations “Roots of Unfocus” (1944) where music and dance come together in a structural way. 2 “Sixteen Dances for Soloist and Company of Three” (1951) is the first choreography where Cunningham made use of the chance operations. The performance consisted of the nine emotions of Indian aesthetics: anger, the humorous, sorrow, the heroic, the odious, the wondrous, fear, the erotic, and tranquility. The order of the emotions (i.e. dances) was determined by chance. Like in many other pieces by Cunningham John Cage provided the music for the choreography.

Cunningham collaborated during his career also with experimental filmmakers and video artists. His experimental movies from the early 60’s, which he called himself “video-dance”, were combining dance and multi-media in an unforeseen way. This type of mixing media and dance can nowadays been seen done by, for example, the famous Nederlands Dans Theater. We went to see one of their performances during our stay in the Netherlands last January to get inspired for our project. Their experimental way of combining different techniques and media on the stage and the phenomenal skill in dance and body control has always fascinatad us both.

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2 Roots of Unfocus, Merce Cunningham Trust. Viewed on 19.2.2014
3 Sixteen Dances for Soloist and Company of Three, Merce Cunningham Trust. Viewed on 19.2.2014

3. & 4. MUSICAL SCORES BY JOHN CAGE
JOSEPH BEUYS

Visual artist and a member of FLUXUS, Joseph Beuys (1921-1986) was on the forefront of the new form of action and performance art. Perhaps his most famous performance I like America, America likes me performed in 1974 was carefully documented by Caroline Tisdall (2009). The Coyote performance took place in the René Block Gallery in New York where Beuys shared the gallery space with a live coyote for three consecutive days.

Beuys, wrapped in felt, was brought to the gallery straight from the airport by an ambulance – and he was also brought back to the airport after the performance by an ambulance. A fence was placed in the middle of the space, which separated the (real) coyote and Beuys from the audience. Beuys had brought everyday objects like two pieces of long felt, a walking stick, a flashlight, and 50 copies of the Wall Street Journal with him1. Through the performance these mundane objects transformed to tools and got their own deeper meaning; all the elements and objects had a symbolic character.

Why did Beuys perform with a coyote? The performance had a mythological context finding its roots in the Native American Myths and legends where the coyote was a worshipped creature and seen as one of the most powerful and spiritual deities. But the arrival of the White Man in America marked the change in the coyote’s meaning liberating it from its divinity to be hunted and killed2.

Next to being a visual artists Joseph Beuys had his own philosophy when it came to teaching; he has even stated that “teaching is my greatest work of art”3. Beuys tried to apply philosophical concepts into his pedagogical practise, which included open ring discussions where he and his students talked about political and philosophical issues and the role of art, democracy and the university in society4.

We might argue that despite the close relationship between art and design we, the product design orientated students in Aalto, tend to forget to openly discuss about culture, politics and the society. It seems to be that there is less influences form the outside world reaching the classrooms, when this “outside information” can be crucial in changing the direction of design. Beuys and other avant-gardists already showed in the 60’s the importance of communication and reflection – something we are nowadays still striving with.

GLASS
TRANSPARENT GOLD

It has been around for 4500 years — starting in Mesopotamia — and it can be seen, or looked through, everywhere in our physical world: cars’ windscreen, windows, mirrors, touch phone screens, laboratory equipment, tableware, eye-wear, even floors and tiles are made out of glass. It also a material craftsmen, artists and designers work with and a material we are fascinated about.

But what is glass actually? Yes, it is a usually transparent and hard but brittle material. From a more scientific point of view glass is a vitreous, solid material that is formed when a melt sets without crystallizing.1 In other, maybe less easy, words: when the liquid mix of different materials becomes solid, the atoms don’t take a structured (crystallized) form but stay disordered. What makes glass special is that it doesn’t contract, decrease in volume, when it transforms from a liquid state to a solid state. The transition from liquid to solid happens gradually and within a certain temperature range giving glass its unique malleability. From a designer’s point of view this is an excellent thing: glass offers almost endless possibilities regarding shapes, properties and processes.

Another answer to what glass could be as simple and cool as: sand, or silicon dioxide. Glass can be made out of many different substances, but the most basic ingredient is sand, which is used for making the most typical glass products. The mixture of raw materials that is melted in order to get glass is called the batch. In the simplest mixtures soda and lime are added to sand where soda acts as a flux and lime as a stabilizer. In this mix sand is the so-called glass former.2 Fluxes lower the temperature and viscosity of glass meaning that the batch will melt in a lower temperature (which is of course a good thing) and that the liquid mixture is more workable. Stabilizers help glass to keep its structure and reduce the risk of crystalization. Sand, as a glass former, is the most common and important part of the batch. You could actually get glass by melting sand alone but that would require extreme temperatures — over 2000°C. Sand has always impurities like iron and chromium in it, that give glass a greenish hue — and the less impurities, the better. Other, more controlled ways of coloring glass is to use metal oxides.

As designers we are not so interested in the technical aspects of glass but more on the different possibilities of glass. Molten glass is like honey, or liquid gold, that slowly starts to freeze, but during the transition process you can manipulate and shape it in endless ways. Maybe that is the magic of glass that attracts designers and craftsmen alike: these mundane and somewhat rigid substances — like sand, lime and soda — are suddenly transformed into tangible and beautiful objects. It is like the legendary touch of Midas or the dream of an alchemist who tries to turn ordinary material into gold. Maybe there is also a tiny bit of God-like feeling in the process of creating something (you desire) out of “nothing”.

GLASSMAKING

First, it is good to make it clear that we are mainly focused on handmade glass in this thesis. When we talk about glassmaking we refer to handmade, manually manufactured glass. The reasons why we are focused on handmade glass are our passion towards natural materials and human processes as well as our wish to promote locality and craftmanship — we believe, like many others, that there is a future for craft.

The craft of glassmaking can be roughly divided into two main categories: hot (or molten) glass and cold glass. Hot glass techniques range from glassblowing and casting to the more decorative Millefiori and Incalmo. The working with hot glass takes place in the hot shop whereas cold glass working happens outside of the hot shop and involves finishing and decoration of a glass piece.

From all the different glassmaking techniques glassblowing is probably the most common and important one. It is widely used and many other glassmaking methods are used together with blowing; usually, if not making casts, the manufacturing process involves blowing — especially if the piece being made has an internal space, like in bowls, vases, cups and in several art pieces. Blowing has such an important role in glassmaking that glassmakers are nowadays usually called glassblowers. Blowing is an essential skill for a craftsman who wants to work with hot glass. Again, from the designer’s point of view, glassblowing has its own meaning: if a designer wants his or her design to be made out of glass it is usually done by blowing and by a glassblower.

What intrigues us in glassmaking, and glassblowing especially, is the theatrical process that takes place in the hot shop. Watching a team of glassmakers, called a chair, working seamlessly together to create something tangible out of glowing liquid is like watching a choreographed dance performance. Because of this feature many glass studios and even factories include a separate area for the visitors to witness the magic of glassmaking. Another interesting feature of glassmaking is the collaborative way of working. Almost never can a glassmaker perform alone but needs at least one person to work with. When making art glass or more complicated pieces
there might be as many as seven persons working together – or even 28, like discovered in the documentary “Mond geblazen glas” unveiling the process of IKEA’s hand blown wine glasses produced in China. A country where men are cheaper than machines. One can of course question the working conditions and social benefits in such a factory that utilizes humans as parts of a “machine” not to mention the locality of this “Swedish Design”.

The collaboration in glassmaking doesn’t only limit to glassmakers themselves but also designers, and artists, can take part in the creation process. The unique aspect of forming glass enables the designer to collaborate with a skilful maker on a different level; not only by drawing the idea but by being present in the hot shop and by directing, assisting or even interrupting the maker a designer can have a great input in the process. It is almost like the designer is the director or conductor and the glassmakers are the actors or the orchestra. Because of its special nature we believe there is a bigger chance for participation and collaboration in glassmaking than in many other crafts.

1 Hjort, E. (2001) p. 14
2 Hjort, E. (2001) p. 34
3 Hjort, E. (2001) p. 53
4 Mond Geblazen Glas (2012) KRO Haarlems nacht van Wouwse
CRAFT TECHNIQUES

Below is a list of some of the more common craft techniques used in the hot shop. Some pieces might involve many techniques and usually different glassmaking methods are mixed together.

GATHERING, i.e. THE START OF A PIECE
A lump of glass is gathered from the pot (furnace) with a blowing iron. Then it is made even by rotating it on top of the marver (a metal plate). When a bubble or air is blown into the gathered glass the parison, or post, is formed. More of glass is gathered on top of the parison as much as is needed for making the piece.

GLASS BLOWING
Air is blown into the glass through the blowing iron. Blowing can be divided into free blowing and mould blowing. The former is used mostly for art glass and the latter for utility glass. In free blown pieces the variations are greater than in mould blown pieces but “the surface of free blown glass is generally smoother and brighter.”

FLARING
Or opening out, is the method of finalizing the shape of an object’s edge before it goes to the annealer. First, a punty (an iron rod) is attached to the base the blown and shaped piece. The blowing iron is knocked off and the piece is turned around. Now the edge can be shaped with different tools – usually the opening is made more narrow or wider.

CASTING
A rather simple and fast technique, casting is basically pouring glass, with the help of a gathering bail or a metal ladle, into a mould. The reproduced pattern is not as sharp as with pressed or injection moulded glass.

INCALMO
An ancient Italian technique where “cups” are fused together. The process starts with a bowl-shaped lower part into which’s opening the first cup’s rim is attached. The formed piece is knocked off the blowing iron and the first cup is opened up for another cup to be added, if needed. Tapio Wirkkala’s famous coloured bowls are made with the incalmo technique.

FILIGREE
Another Italian technique that originates from Venice, in which coloured glass rods, or canes, are arranged in patterns and attached to a clear glass core. The rods can be placed on a metal plate (marver) or vertically in an iron mould. After blowing the parison into the mould or rolling it on top the rods affixing the rods to it, the parison can be further worked into the desired shape.

GRAAL
Not perhaps as holy as its name suggests, the Graal technique starts with gathering numerous layers of coloured glass to form the parison which. The cooled down piece is then worked by cutting, engraving or etching to produce patterns on its surface. Now the piece is reheated and covered with a layer of clear glass and blown into its final shape. Because of these steps the glass moves and often deforms the décor.

The techniques are selected from:
An Introduction to Glass (2005)
GLASSBLOWER’S TOOLS

As with techniques there is also a wide variety of tools that can be used for forming glass by hand. We asked the students and professionals alike what is their favourite tool and the results can be found on page 66.

THE BLOWING IRON
The main tool for any kind of blowing this hollow metal rod is about one meter long and it has a thicker end part onto which the glass is gathered. This part is called the nose, and the plastic or brass part on the other end of the pipe is the mouthpiece. The length of the pipe and the size of the nose and mouthpiece depend on the user and the amount of glass that is used.

GATHERING IRON AND GATHERING BALL
If the glass is not to be blown, it is then usually gathered on a gathering iron or gathering ball. They both are solid and straight steel rods but the gathering ball has a steel ball at one end, hence its name. Like with the blowing iron’s nose, also the size of the ball is determined by the amount of glass required for the final product.

PUNTY
This simple, solid steel rod is for transferring glass from the blowing iron in order to work with the other end of the glass – a punty is used for example when an object is to be flared.

JACKS
These tweezers like shears are for shaping or flaring the parison, or to trim the glass. They are very common and important tool and almost every glassblowing process involves a part where they are used.

TWEETERS
The giant version of hair-picking tweezers. These squeezing tools are used to grasp and stretch glass (pinching).

SHEARS
There are different kinds of shears but perhaps the most used ones are diamond shears. They can be used for cutting and attaching glass in various ways.

TAGLIA
Or “tag” is square-ended knife made out of steel. It is used to shape or sculpt molten glass.

PADDLE
A paddle is a rectangular wooden board with handle that is used to smooth the bottom of the glass to make it even and stand firmly. It is also used, by the assistant, to protect the blower’s hand from the heat of the parison.

BLOCK
These big spoon-like blocks are used to make the parison even. They are of wood and come in different sizes depending on the size of the parison. Metal blocks are used for casting bigger amounts of glass, for example when casting large glass blocks.

NEWSPAPER
No, it is not to keep one updatted on the buzz. A piece of wet newspaper is a really common and simple tool for shaping the glass by hand. It is not really a tool but more like a protection for the hand that wants to mould the glass.
CALIPERS
Calipers are a small metal tool used to measure the dimensions of the piece being made – like the foot during shaping, the width of the neck when making a bottle, the girth of a bowl etcetera.

PUFFER
After flaring the glass piece open a puffer can be used for further inflate it. It is basically a thin metal tube attached to conical nozzle.

AIR
For cooling the glass during shaping, compressed air or fan air can be used. A more poetic interpretation of air as a tool is the air the blower blows into the glass, like Sara Huikininen describes it (p. 119).

BODY
Continuing on the poetic track, the body of the maker can be seen as a tool and all the other, non-human, tools are just different extensions of the body.

FIRE
A distinctive element in the craft of glassmaking, fire (or heat) is the power that melts the raw materials into glass. During the shaping of a glass piece fire is used, in the form of a gas burner, to heat-treat a specific part of the piece.

MOULDS
Not as common in studio glass than in factory glass, moulds come in different materials, shapes and structures depending on the purpose. When making serial production or when the shape must be exact or just produced faster, moulds are essential. For mouth blown glass the moulds can be either wood or graphite and rotating or fixed. Wooden moulds wear quickly and therefore suitable for smaller productions than graphite moulds.

Rotating moulds are more common and the glass is rotated inside the mould during the blowing process. A layer of steam is formed between the (wet) mould and the hot glass resulting in a surface of great quality that needs no further treatment. In fixed moulds the glass is blown without rotating and without the protective layer of steam copying all the details of the moulds inner surface – for this reason fixed moulds usually feature a decorative pattern.

A fast and cheap way of making moulds is to use plaster or moist sand, like in the old technique of sand casting.

The tools are selected from: An Introduction to Glass (2003); Tools of the Glassmaker. Corning Museum of Glass.
WHAT IS YOUR FAVOURITE TOOL?

ANSWERS COLLECTED FROM OUR INTERVIEWS AND QUESTIONNAIRES

EVERYBODY LIKES JACKS
THE TOOL IS AN EXTENSION AND SPECIALIZATION OF THE HAND THAT ALTERS THE HAND’S NATURAL POWERS AND CAPACITIES. WHEN AN AXE OR SHEATH KNIFE IS BEING USED, THE SKILLED USER DOES NOT THINK OF THE HAND AND THE TOOL AS DIFFERENT AND DETACHED ENTITIES; THE TOOL HAS GROWN TO BE A PART OF THE HAND, IT HAS TRANSFORMED INTO AN ENTIRELY NEW SPECIES OF ORGANS, A TOOL HAND.\(^2\)

Juhani Pallasmaa

TOOLS
CRUCIAL EXTENSIONS

For some reason designers often love to talk about tools. The first thing a human has ever designed is a tool, a piece of hacked stone or a hewn tree branch to make life easier. Tools are ultimately objects that try to enhance our lives and to help perform certain tasks more efficiently; they are not only about survival but also about well-being.

Tools are a fascinating extension of our hand and body. When using a tool we become someone who is able to hunt, prepare food and manufacture things – through using tools we become new species, homo faber. Tools have been extremely important for the evolution of human beings both anatomically and intellectually; some scientists have even suggested that there is a link between making tools and the development of language\(^1\). The first stone tools made by hominines, found in Ethiopia, date back 2.6 million \(^1\). One of earliest tools was the hand axe, which is still used today although stone has been replaced by metal.

It is a cold fact that without tools we would not be able to do much, we are more dependent on them than we might think. If you were to count all the tools you use the amount would quite surprising: kitchen utensils, computer and smart phone, stationary, toothbrush, hairbrush, vacuum cleaner – not to mention gardening and working tools.

Although we use tools daily for mundane tasks there are those who use tools to create something special: the master craftsmen. Seeing a carpenter making a cabinet or a glassblower shaping a vase is looking at someone who has a total control over his hand, mind and tools – they merge together. Unlike dancers and performers the craftsmen rely on their external tools, being incomplete without them.

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2. Language and tool-making: tools evolved at the same time. University of Liverpool. Viewed on 3.3.2014
3. ibid, K. Kozlowska. Viewed on 3.3.2014
TOOLS FOR OBSERVATION

When we visited Nuutajärvi to meet Manika, one of the teachers from the glass school, we proposed to use film as a tool for observation. We asked for permission and had a contract to be signed by those we film. From that moment on we were free to film in the school and to talk with the students and teachers.

Filming offers the possibility to capture the movements of the blowers and the magical process of glassmaking; we could take something we had seen with us and analyse it. We captured success, errors, teamwork and a lot of sweat. Observing by filming on location resulted in over 50 hours of film material.

Other tools we used besides filming are interviews and short questionnaires, and of course our all five senses and intuition. All the material collected and all the moments experienced have helped us in understanding what glassmaking is and where it might be in the future.
INTERVIEW / RAISA KOIVISTO, CHIEF CURATOR OF THE FINNISH GLASS MUSEUM

Anna & Kristos: What makes Nuutajärvi so special?

Kaisa Kohvio: Age, the oldest glassworks in Finland, old in any standard. Lots of traditions, vital part of Finland’s industrial history / design history. Unique art glass made in Nuutajärvi since the early 1950’s should give Nuutajärvi a special place in the international history of glass. Colours and art glass are the two most obvious differences between Nuutajärvi and Iittala. The third difference is pressed glass production. Iittala did not make any pressed glass between 1963 and 1995. Also the atmosphere was different: the designers were not rivals but talked openly about the projects.

AK: Do these changes (regarding the school and the factory) now happening in Nuutajärvi have any effect on the tacit knowledge that is there?

KK: Yes. People who have lost their jobs have in many cases totally lost their interest. Even if you can somehow keep a track on technical knowledge, it doesn’t stay alive without being used.

AK: What is your opinion on the glass education in Finland? Should there be more / less schools? Are the aims of the schools matching the current status of the field of glass? You also mentioned collaboration being one of the important things that should be taught.

KK: The glass education in Finland is not very good. There is no tradition in glass education and the aims seem to match (maybe) more the thoughts of some politicians, local government, teachers and professors. The idea of teaching useful skills to students seems to be missing. The students of design and students of glassmaking should work more together. However, glassblowing skills (or other craft skills) should be on the level that allows serial production and cooperation with designers. This is all the more important since designers of today do not have the opportunity to specialize solely on glassmaking. They need the skills of the glassmakers even more than before. If we want to keep hand made glass alive in Finland, we need good blowers. If we want to keep the quality of glass design good, we need good blowers willing to collaborate with designers.

AK: You told us that Finland is already losing its glassmaking skills. Could you mention some of those skills or techniques? And when did this start?

KK: This is a difficult one. I don’t know in detail all the special techniques used e.g. with Olavi Toikka’s Birds. I only know that the Birds keep up at least some of the techniques. On the other hand, some workshops have brought to Finland some new techniques that are used by some studio glassmakers, like glaze and lamination. Of the art glass techniques the one, which is not used very much, is stick blowing, which has been used a lot in Iittala in the 1950s. Cased glass (colour blown on top of glass) is maybe lost all together. It used to be a common technique used in lead crystal production, but has been used by glass artists both in Iittala and Nuutajärvi. Cutting and engraving are of course almost totally out of use.

AK: Why is it that handmade pieces are so much cheaper, at a flea market for example, compared to the industrially made pieces? Is there some other reason than a strong brand or designer name?

KK: Glass has been made for 2000 years with the basic idea of serial production. It is a trade with a long history. Most of glass products are serial production and meant to look like serial production. Most of the people appreciate the beauty and usefulness of the objects they buy from the flea market. If they can recognize that it is Iittala piece or Kaj Franck piece, the price they are willing to pay goes up. However, very few people can tell the difference between mouth blown and machine blown tumblers. So mouth blowing as such doesn’t give any extra value. On the other hand anything that clearly looks like handmade, even if the quality of design and blowing is terrible, can be more expensive. Quality as such is not so easy to recognize.

AK: What direction glass making will go in Finland? What would be beneficial for the glassmaking culture?

KK: Iittala as the only glassworks in operation should think more of their products as something special. Many people, not only Finns, are willing to pay for high quality design handmade Finnish glass. Talking about the tradition of Finnish glass design is not enough if the products are not made in Finland, not handmade or even designed by Finns. I am aware that the name of the designer is internationally not a very good selling point. However valuing customers and their expectations might prove to be good policy in the long run.

AK: Do you know any other glass village that went through a similar change like Nuutajärvi? Or can you give an example of an interesting / successful place where handmade glass is made?

KK: I do know similar glass villages. However, the outcome has hardly been successful anywhere. Småland (The Kingdom of Crystal) is full of similar villages, Åfors, Roda, Sandvik... Roda has got a new amazing glass museum The Glass Factory that brings in 40 000 visitors a year. They also have a studio but no serial production. Glas Hergiweg! In Switzerland seems to be working quite well in Nuutajärvi-like conditions. It is the only glass factory in Switzerland, selling practically only to Swiss people – a lot of tourists, mainly from Switzerland as well. Then there is the reputation of Roberto Niderer (1928-1988) who was a well-known designer in the 1960s.

AK: Why is it important to keep the culture of handmade glass alive?

KK: Ones lost it is very difficult to revive any craft. However, what makes the situation in Finland very difficult is the fact that Finland does not have a glorious history in glassmaking compared to e.g. Bohemia, England, France or Italy. Our ‘glorious’ history is high quality glass design, factory production. However, craft and factory work are further and further apart. It should be possible to develop both craft skills and design together, and in this way keep handmade glass alive also in Finland.

AK: Is there space for new fresh concepts / ideas / innovations in glass?

KK: I think we are in desperate need of fresh concepts / ideas / innovations. I think here as well the collaboration could be the key idea. Not everybody trying to manage everything alone. Being more open to the outside world, more active to collaborate also internationally.

AK: More about collaboration. There was a difference between the working methods in Iittala and Nuutajärvi, how designers collaborated with the blowers. Can you tell us more about this?

KK: Tapio Wirkkala used to make test mounds, first of wood, later graphite. Graphite mounds could be used in centrifugal casting and still mould blowing as well. Timo Sarpaneva made a lot of drawings. Wirkkala made a lot as well, but did not bring very many to the glassworks, since he already had the test mould. That made the product development process faster.

In Nuutajärvi Kaj Franck made a lot of small sketches, (on TAKO cards, small cardboard clips). Olav Toikka used them as well, but his pictures were more preliminary, and he talked and explained more. On the other hand, Olav Toikka has pointed out, that making serial production and making art glass are two totally different processes.

In all Finnish glass factories it has been customary, that the designer is there when the test pieces are made, in some other countries (and maybe also in Finland today)? the drawing is considered to be enough. Today it is of course possible to make a 3D sketch, so that might very well do in serial production?? Art glass of course needs still the collaboration between the artist and the glassmaker.
NUUTAJÄRVI
WHERE THE BIRDS ARE BORN

This small but idyllic glass village two hours from Helsinki proved to be our focal point and test platform, but also a place where our minds could rest and new friends were made. For our research we chose to work and do our observations on location; getting to know and observe those who live in Nuutajarvi was crucial for our work. Only then, when mutual trust and respect have been gained, it is possible to discover these hidden stories and personalities.

The people who live in Nuutajarvi have been extremely kind to us. One big advantage has been that the village is so small; it has fewer than 400 inhabitants, so rumours and news spread fast, really fast. After a few days of filming people started approaching us offering their help. Maybe there was a small part of curiosity, but for us this was an extra joy and of course extremely helpful in the process. One day, when putting our filming equipment outside the school, we started talking with one of the visitors of Nuutajarvi village. This older lady, around 75, turned out to be an ex-resident of Nuutajarvi, which was during childhood times a poor factory village. Despite the difficult times she had only good memories of Nuutajarvi; like how the kids used the mountain-like sand deposit of the factory as a slide or how they were playing in the small river. The buildings are still there as well as the river but there are no traces of kids playing there.

Although the factory, famous of making Oiva Toikka's birds, will soon stop its production and move some of its workers to the Iittala factory Nuutajarvi is still full of old buildings housing glass facilities; the glassblowing school Tavastia and Lasikompannia together with other small studios are using the old factory building (Vanha Hytti); a glass museum designed by Kaj Franck is in the old brewery (Prykäri); Iittala shop and NuGo shop, selling local glass produced by independent makers, are located in two opposite wooden buildings (some irony there?). The houses where the workers and others live surround the village spreading out all the way to the beautiful lake Ruta.

There are of course other glassworks or hot shops in Finland but Nuutajarvi differs from them in that it is a breathing community, a real village, where almost everybody is involved in glass keeping the glass knowledge alive. From a historical point of view Nuutajarvi differs from for example Iittala in that there was a strong focus on teamwork and collaboration between the artist and the maker like Kaisa Koivisto has stressed out in our conversations with her. Where Tauno Takala and Timo Sarpaneva (Iittala) worked more through moulds and drawings Kaj Franck and Oiva Toikka (Nuutajarvi) worked through the craftsmen, the team.

BEST THING IN NUUTAJÄRVI?
ANDREW COLLECTED FROM OUR INTERVIEWS AND QUESTIONNAIRES
A SHORT HISTORY OF NUUTAJÄRVI

1793 Jacob Wilmont Depot and secretary Harald Furuheim establish Nuutajärvi Glass factory.
1822 Johan Furuheim becomes the owner. Nuutajärvi manor is built.
1851 Adolf Törmänen becomes the owner Nuutajärvi.
1852 German G.F. Stockmann, Swede A. Andersson (bookkeepers) and seven German glassblowers come to work in Nuutajärvi.
1860 First Finnish glass blowers taken on as blowers.
1861 The glass village burns down and is rebuilt.
1872 Torsten Costander becomes the owner of the factory.
1876 Gas furnaces are taken into use. Production value goes up circa 50 %. Anders Norstedt becomes Andersson’s assistant.
1881 P.M. Abrahamsson leaves Nuutajärvi and establishes his own glass works Iittala.
1890 Nordstedt leaves Nuutajärvi to work for Iittala.
1905 (To discover suitable collections) the first glass competition is organized, won by architect Walter Jung and Helena Wenius.
1946 Gunnar Nyman visiting designer of Nuutajärvi (till 1948).
1949 Nuutajärvi Oy is established.
1950 The glass factory burns down and is sold to Oy Wärtsilä (the owners of the Arabia factory)
1951 First Nuutajärvi catalogue is published.
1952 Kai Franck becomes artistic director of Nuutajärvi (till 1976).
1952 Saara Hopea starts as an in-house designer at Nuutajärvi (till 1959).
1963 Oiva Toikka starts as an in-house designer at Nuutajärvi.
1971 Nuutajärvi starts selling products under the name Arabia.
1972 Kerttu Nurminen becomes in-house designer at Nuutajärvi.
1977 Glass museum Prykärä designed by Kai Franck opens its doors.
1983 Markku Salo becomes in-house designer at Nuutajärvi.
1987 Wärtsilä buys Iittala glass factory and Iittala and Nuutajärvi are merged.
1990 Hackman Oy buys Iittala-Nuutajärvi.
1993 Glass school is established.
1995 Dale Chihuly’s team rents the factory for workshops (till 2012).
2000 Nuutajärvi factory starts producing unique glass pieces for Iittala.
2003 Lasikomppania is established.
2004 Hackman is sold to Ali group (Italy) and the same year sold to ABN Amro (the Netherlands).
2007 Fiskars Oyj buys Iittala Group.
2014 Nuutajärvi factory closes down on the 6th of March at 13.00. Some blowers and machinery moves to Iittala factory.

Gathered from the book Nuutajärvi, 200 Years of Finnish Glass
KJ FRANCK & OIVA TOIKA

Perhaps two of the most influential and prolific designers in the history of not only Nuutajärvi but also Finnish glass, Kaj Franck and Oiva Toikka shared a studio in Nuutajärvi for over twenty years. Despite sharing the working space and being close friends the artists were almost like day and night in their personalities and visual vocabularies. Where Franck is a functionalist designer of simplistic utilitarian glass Toikka is then a wild artist making eccentric art glass. But what can be regarded a common factor between these two is their belief in experimentation and collaboration between the artist and the maker.

Kaj Franck worked full time at Nuutajärvi from 1950 till 1976 and produced more than 300 designs for blown and pressed utility glassware. Oiva Toikka started at Nuutajärvi in 1963, under the “command” of Franck, and is still creating designs for littala Group – mostly new birds. Toikka’s designs are mainly unique art pieces although he has also created some highly successful utility series that are still in production like Kastehelmi. The creation process of the unique pieces proved to be for both Franck and Toikka a stage for experimentation where new methods and ideas could be tested and discovered. In fact it was Franck’s approach to the creative process – where experimentation played a big part – that influenced Toikka’s later work.

“In close teamwork individual roles lose their meaning and the common goal becomes the concern of all.”

Kaj, Franck

In his experimentations Toikka was obviously not afraid of mistakes and accidents and "ugly" outcomes but instead many of his sculptural works seem to grow from surrendering to the element of chance. However, in the end all of Toikka’s work relies on the nurtured relationship between the artist and the highly skilful maker. Toikka himself compares working with glassblowers to an orchestra that is commissioned to play for him and in which someone “can always be out of tune” referring to the different personalities of the blowers, which he also wanted his works to reflect on.

A technical gimmick and the skill of the craftsman have always been more important in Toikka’s work than a beautiful design. This kind of thinking is perhaps something he absorbed from the ideologies of the sixties and the seventies; craft revival and studio glass movement had a great impact on the glass industry and the artists of the time creating a conflict between the two institutions pushing some artists to start their own studies. But Oiva Toikka stayed – maybe because of the possibility for collaboration with the glassmakers, who he needed for making his art and who were part of his art. Toikka has even stated that "it’s the teamwork that’s best in the factory.”

Also Kaj Franck had a strong philosophy on the importance of teamwork, which can be clearly seen in his choice to be not mentioned as “the designer” of the works anymore. In the 1960s Franck decided to stop using his and others’ name as the designer of mass-produced products favouring anonymity over celebrity. This kind of anonymity would nowadays be unthinkable; the name of the designer and the design itself are big marketing tools. An interesting notion is that in the first decades of the 1990s in Sweden, when artist were working at the glassworks, the unique pieces were signed by both the artists and the makers.

Kaj Franck tried to live by his ideology and enjoyed working in the factory more than being behind his desk. Together with the glassblowing team he made experimental glass pieces in order to create new glass techniques that later could be used in his designs. During these hours of experimentation the techniques “exploded casing”, “spun glass” and “cylindrical rings for plates” were born. If Franck was not satisfied with the results he would return to his drawing table and returned to the hot shop with new solutions. This was an ongoing process.

Next to working with the factory blowers Franck brought glassmasters from outside Finland to Nuutajärvi. Those blowers brought new techniques with them, some of which are still in use. Kaj Franck asked Armando Jacobino from Italy to come and work for Nuutajärvi. He introduced the pinching technique to the factory, which nowadays is still used in Oiva Toikka’s birds. Later on Jacobino started his own glass studio, which eventually went bankrupt. Another person Franck brought to Finland was Marvin Lipofsky. He showed the possibilities of studio glass in 1970 through his workshop held in the factory.

Both Franck and Toikka were working in a team with many different skilled craftsmen – their success was dependent on the makers. These two designers were team players. To deeper understand the way Franck worked and his role in the factory we asked Tapio Yli-Viikari, professor at Aalto University and a person who knew Kaj Franck personally, to explain his role and methods in the hot shop.

TVT: Kaj Franck was very talented in drawing and design but in craft of making glass he was fully depending on cooperation with glass blowers, mould makers and material developers. For him a long lasting relationship with master craftsmen was essential. It was possible because he was given a very independent position in the factory.

Tapio Yli-Viikari also mentions that for mass produced series Kaj Franck worked in close collaboration with engineers and the material laboratory developing for example new technique for pressing glass in Nuutajärvi. For unique glass, art objects and limited productions Franck and Toikka usually worked with an art glass team with a master, senior blower, junior blower and several helpers depending of what was in agenda. The glass masters got to play a big role in the development of new models and some of them – like Jaakko Niemi and Unto Suominen – even had their own designs next to Toikka’s and Franck’s in exhibitions and eventually in production.

This shows that making glass was in the years of Kaj Franck not a one man’s but several men’s job and the process happened in collaboration with at least one skilled craftsman from a specific field. Nowadays there is less intense collaboration between designers and makers in the field of craft. When a designer wants to work with for example a glassblower he usually has his / her drawings ready and a talented blower will blow the piece – the drawings can even be sent via email removing the need for any physical interaction. Misunderstanding each other and the wrong interpretations can make it hard to
reach a satisfying result. And we do not only talk about the designer or the consumer but also about the craftsmen. The work should be meaningful and enjoyable for both the designer and the maker, which – we believe – will in the end be visible in the final product.

Can new ways of collaboration and new methods create a fruitful future for designers and glassblowers? Times have changed and you should look further behind the hils but there is always something to be learned from the history, something to carry with you when heading forward. What has happened to the experimental and collaborative mentality of the sixties and the seventies when the boundaries in art and craft were pushed and pulled and intertwined? Some walls have to be broken in order to create new spaces and that is what we are trying to: new spaces.

STUDIO GLASS MOVEMENT

Glass has attracted all kinds of people since its early days in the Middle East. But the main purpose of glass making has been serial production meaning that the people involved in glass manufacturing have been mainly business managers, factory or mill owners, administrators and of course skilled makers (glassblowers).

However, following the Arts and Crafts movement, industrial production was going through an ideological change in the turn of the 19th century; more attention was put on the aesthetics of a factory-produced artefact making way for the artists to appear in the industries – this phenomena can be seen as the start of the applied arts and industrial design. Also glass factories got their own artists creating new series differing from the standard ones being used by glassworks throughout Europe. During the two great wars artists, or designers, had established their position in the glass industry and more artists and designers were to come.

Another major shift in the glass field was the rise of the Studio Glass movement that started in the United States in the early 1960s when ceramist Harvey Littleton together with glass research scientist Dominick Labino devised a small furnace making it possible for artists to do glass independently¹. Artists no longer were controlled by the industry, the glassworks, but could now put up their own hot shops and experiment with glass freely and “make any products they wished.”²

Some of Littleton’s early students like Dale Chihuly, Marvin Lipofsky and Fritz Dreisbach have contributed greatly on the development and awareness of studio glass around the world³. From these artists Chihuly and Lipofsky have been influential also for Nuutajärvi by organizing workshops in the factory. Lipofsky was brought to Finland by Kaj Franck to show what this new movement was about. Chihuly’s team was renting the Nuutajärvi factory from 1995 till 2012. Although Chihuly has Lipofsky were experimental and innovative in the field of glass blowing some artists struggled with the material seeking for technical guidance sending them to Sweden, Czechoslovakia and Italy⁴.

Some studio glass artists were brought from America to Europe to teach about the new movement but at the same time other artists were going to Europe to learn the techniques, and it did not take long before Studio Glass movement had conquered Europe and artists could escape the factories they once had worked with.

The Studio Glass movement has an emphasis on the artist as designer and maker and is characterized by the sharing of knowledge and ideas among the artists⁵, which is usually impossible in the industry. The absence of industry’s pressure also makes way for experimentation and developing new techniques, innovations and styles, what again might trigger the industry to evolve.

The impact of the movement is undeniable and it still has dominance amongst the independent glass makers. What could, though, be seen a downside of the Studio Glass is that it promotes the artist over the maker. What if every glass blower wants to become an artist instead of a skilled craftsman? The current curriculum of the glass blowing school in Nuutajärvi does not include art nor design education and its goal is to teach the student the techniques and skills to work as a blower, not as an artist or designer. Still many of the students and professionals, at least based on our observations and interviews, seem to aim for that; only a handful could do commissioned work for an artist or a designer. And the cold fact is that we designers need glass blowers if we want to work with glass but the glass blowers do not necessarily need us except maybe for marketing purposes which is how some of the students put it when asking about the meaning of the designer.

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IN DIALOGUE
WITH THE VILLAGE PEOPLE

During the days spent in Nuutajarvi have been talking with several people living or working in the village. The following persons are all living and working there, with glass.

JANNE RAHUNEN
Glassblowing student

SARA HULKKONEN
Glassblower and teacher

MARIKA KINNUinen
Glassblower and teacher

MIA HEIKKINEN
Glassblowing student

HEIKKI VIINIKAINEN
Glass designer / Lasikomppania

TERO SILVER
Glassblower / Lasikomppania

HELENA WELLING
Glassblower / Iittala

MITSURU SATO
Glassblower / Iittala
DIALOGUE / JANNI HAHUMOEN

In the beginning we are talking with Jarno about his collaboration with two girls from Aalto University. We ask why he is blowing for them although they are from the glass and ceramics department – so they can blow a bit themselves.

JR: Well, it started sort of like that, I had an idea of working with designers... Metropolia (industrial design) students come here with their moulds but they are fast projects... I got contact details of a student (Sini) from Nathalie (Lahdenmäki)... Sini came to Nuujaarvi and we did blowing for 4 days, one day more and we could have made ten (pieces)... It's always about that one day...

It started from... ask something, please...

K: So, how did it start with the students from Aalto?

JR: I asked the teachers about a possible collaboration and they interviewed their students... A couple of students were interested... Sini had these grill vases... mould-blown, so quite clear. With Sofi we will do more free blowing, mushrooms...

I like the idea of... there’s a lot of studio glass where blower and designer are the same person... but I somehow like the idea that there’s two people thinking, and doing it... both doing what they’re good at.

K: Do you think designer and blower is a good combination, or two blowers doing it together?

JR: Designer and blower.

K: Do you have any interest in the design process?

JR: Yes of course... In the best scenario I would do this for living... I would partly do and sell own designs and then partly do blowing service for designers... That’s why I tried to contact designers... This (school) is a good platform to practice... no pressure on the result in that sense.

K: So mould-blowing is not unpleasant for you to do?

JR: No, of course not. It is as much of blowing than any other. I’m not picky about the line of work, routine work... It fits me.

K: Do you feel that you had to do a lot of work to get into contact with these design students (from Aalto)?

JR: Not really, the starting of it was really smooth. I feel that with Aalto it is nice to do these things because people are motivated.

K: What then after this school when Aalto is not anymore as a support? You are graduating in Christmas?

JR: I’m not in a hurry because there are such good possibilities to practice here... My plans are to be here in the spring... and the school’s situation is what it is... If it ends... so I don’t see any problems in staying still here.

We are talking about the importance of connections with companies.

JR: It is crucial that you are in contact with companies or employers already during your studies...

K: Does that happen here (in the school)?

JR: Yes, this is a top place for learning glass blowing because Lasikompania and glass professionals are here... it works here... not necessarily employers but professionals... I think it is really important to be linked to the working life. The aim of this education is to acquire a profession... you get the professional skills and then go to work... “laughing”... maybe it’s a bit old-fashioned way of thinking. But it apparently doesn’t go like that with the designers? It is so shattered the field... freelance based... it is a sad thing...

K: And companies don’t know why to hire a designer, what would they do in the company? You have to be good in this and that... but then you’re not really an expert on anything...

JR: There’s no platform for designers... It has to be efficient... maybe it needs some space... that there’s is time and money to take it a bit more “relaxed” (give space for creativity)...

K: That’s why people are putting up small companies and groups. Where are you going to work then?

JR: I hope in Lasikompania, I don’t really have any other choice... if I want to make glass I feel Nuujaarvi is the only option for me.

K: You are prepared to stay and live here?

JR: Well, yes I am... but you have to come up with something... have a link to Helsinki... not to get stuck here...

K: And there’s Lasiskirkus... they were in the spring at Aalto to do some blowing. Aalto has great facilities (to do glass), but what I feel is missing are the visits of professional blowers. There are the bachelor students but they don’t really blow glass... they work with glass and design with glass...

JR: Yeah, so I’ve heard that the there’s not much blowing going on there...

K: No...

JR: I feel that it is important to create a bridge between Aalto and Nuujaarvi...

K: That would be really essential...

A: Yes, that would we nice...

JR: That would be great. It is so damn essential... in a way designers are the future employers of glass blowers... that’s how I see it. I like it, I have an old fashioned view that you have to have work... there is still some of this designer-blower collaboration here... Camilla and Markku and... hmmm... but it is really fruitful and interesting, really interesting the collaboration between schools.

K: I have a feeling that nowadays people want to do things themselves. Some blowers do their own (studio) glass and designers want to master the material (to be able to work independently...)

A: Then sort of... then, then... it goes back to education because education is so individual in Taal. They have to change it.

K: How do you see it, where does the education aim (at Tavastia)? Is it just to give the tools to then choose your own path?

JR: It aims to give professional skills... educations aims to teach something. Here they teach glass blowing. It’s a demanding field... to suddenly jump somewhere after this short period (in school)... glass demands years of practice... 2.5 years here, it is a really short time. From here if you have to suddenly go and start your own company and start selling things... It’s a good question what this education is aiming for.

K: But maybe that’s why there is a place for this collaboration (between schools). Then the pressure of “where our students will be placed after the studies” doesn’t rest on one program’s shoulders... Collaboration projects would create relationships... and projects so you would already have a concept (of what to do) when you’re out of the school...

JR: Same it is with designers... it is also for you difficult to put up a company after graduating and come e.g. here to ask Lasikompania to do some thing for you... that’s is even more difficult for you.

K: It is so freaking expensive...

A: Yes...

K: And you don’t know for whom to sell it... because that neighbour there (Illitala) won’t buy anything...

But something else; what do you feel is the most important thing when blowing glass?

JR: I guess balance... or like this is funny to say after (only) studying two years what the most important thing...
K: Well, is there something that feels essential?
Jr: Balance is important. Like that... hmm... Well, if we go to technical things... everything you do, I have thought about it like that is has to happen... to the whole object... it has to be in balance the whole thing... the rotational movement has to be good... it is a lot about the observing the temperature... everybody has their own way of blowing glasses... balance... it is a nice word but... it is quite a broad concept... "laughing"... today was a bad day by the way... of course want finished object but this is practicing.

A: How did you decide to come here?
Jr: Well, I'm from Helsinki and I was working for 3-4 years in a pharmacy store. It was like regular work. I just started on one spring to think this could change and browsed through different educations and saw glass blowing. I was just searching with keywords like crafts and glass blowing just sounded so cool. Then I started checking through different books... borrowed books about glass from the library... and then I applied here and got in.

A: You lived in Helsinki before and then you moved here. It is quite a different environment.
Jr: Many were wondering about that... for some the quaintness might be a problem... but it fits my personality... the forest and the nature... I go out there quite a lot. I haven't had any issues with (living in) Nuutajärvi. I really like Helsinki. It has a lot of culture and stuff... when I go there I attend many things... Maybe recently I have had a longing for Helsinki... but I don't feel anxious about Nuutajärvi... although it's quiet here... but... you make glass here. And then I sleep and eat. "laughing"

A: Nuutajärvi is really beautiful. What does it mean to you to live in Nuutajärvi? If the factory will... and the school's future is uncertain... and everybody who live here are somehow involved in glass?
Jr: Yeah, many of them are. At the moment 360 people live here and 40 of them are working in the factory... but... not so many are anymore doing with glass because they've gone on pension... and not like in the 80's and 90's... I asked Matti Räsänen, who worked at those times in the factory, how many worked there at the most and it was like 250-360. So everybody here were involved in the factory... then the factory did more than only paid salary... But I don't know... It has apparently been for a while that the factory will be forced to shut down... or not being invested in... that it hasn't been the main thing for a while... at least not as important as it has been. There is a contradiction... I was working at the (Nuutajärvi glass) museum in the summer and all the people... or many from the big audience know the village through the factory and thinks the village will go down with the factory. But then you just try to say to them that there are plenty of other things... or that the Lasikomppania will continue and it has energetic blowers and artists... it is really energetic...

A: How does it affect... because there's a lot of this tacit knowledge here? I like Sara yesterday said there's a lot of tacit knowledge here because the glass has always been here. And if the school now stops... or moves away... does a lot from this knowledge disappear?
Jr: Well... there is knowledge here although the factory leaves... Lasikomppania... Lasikirkus has been doing this for so long and Markku (Salo) has worked as a designer at the factory. So there is knowledge. And it will not in my eyes disappear. But maybe for the school... maybe that's the problem that it is partly so expensive... and the factory people are responsible for the maintenance of the school's machinery and ovens... so that will end... maybe those as well affect the continuation of the school.

A: The knowledge stays here but it doesn't go forward... to another generation... it doesn't evolve.
Jr: A smaller group stays here...

A: What kind of future scenario would there be... there's this group now but how does the knowledge go on to the kids... or... how does it stay here in Finland... after 50 years everybody is 80 or 90... and...
Jr: It is true... it is a pity that in many fields there are not going to be those persons who have been in the field for 40-50 years... that kind of person is a data bank... that is maybe disappearing... that kind of knowledge. But then again does the knowledge comes from being in a factory for 40 years... maybe you can get it in a different way.

K: From Wikipedia. "How to do glass". How do you learn to blow glass?
Jr: I learn by doing it. I'm doing my internship at Heikki Vilnikainen's studio. And it has been a really good thing... I have been able to work with the professionals at the Lasikomppania. There I have learned really a lot. And of course the teachers teach at the school.

A: So you have learned a lot from others living here in Nuutajärvi who are working in the field of glass?
Jr: Yes, exactly so. And with Matti Räsänen it has been excellent in the hot shop... he gives exact advices... do like this, do like that. Really good to learn from. Older generation teaches the younger one. It is a really good thing. But there's no continuation... damn there is no... I was still thinking about that... that there is going to be those... there is this knowledge... guys from Lasikirkus have been there for a long time... it doesn't mean that the knowledge will disappear... that although the field is quite a small one... it might, on the opposite, mean that the knowledge will expand... that there's more of it... that people will acquire more information... they won't be stuck only on that knowledge... there's also that side. Don't you think?

K: Hmmm... Of course if there's not going to be more glass blowers... what then... where do we get them then from... from Thailand?
Jr: Maybe from father to son... like when it (glass making) started... when this village was build there were German blowers and they brought their sons with them and knowledge went from father to son... now what if everything concentrates to Lasikomppania...

Jr: Yeah, what after that... then it's our kids...

K: You have to make kids...
Jr: There's a good motivation to make them.
K: But what inspires you in glass making?
Jr: Well that's quite an artistic view... at the moment I don't have a great source of inspiration... I don't have any roots sort of... well I play drums which is creative doing so to say... But I haven't developed yet, in glass, something that would inspire. I follow different arts and read books... follow fine arts... but that in glass at the moment I get kick out of the doing... that... it's hard to name some typical... that I would get inspired by nature "laughing"... I don't know I just feel it's really nice. I enjoyed a lot to blow glass.

A: Do you enjoy the doing?
Jr: Exactly so. Doing glass. Blowing and handling glass and creating something. That's where you get the kicks from. I actually miss some kind of tutoring or guiding in the artistic side. Maybe I will apply to a designing or more artistic school. I have this spark that I would like to do something with more content. Now it's more of practicing. It would be great to do something more critical so to say... in any level.

K: Would you still do collaboration, like you have already now done with the designers (students)?
Jr: It is my dream to do both. To have work with designers and to have own things going on. I'm just starting... and now when we are talking about these... but I am excited.

A: What is the nicest moment, when you are working with glass?
Jr: From the times of the day the best is the morning. In the morning there is clearness. I am fresh and best things have happened in the late morning. In glass making... It is often when you start a whole new thing... I try to concentrate and go through the steps of the process... and then the making starts step by step. The assistant has a big role in it... that he does the things well... Best feeling... it is the feeling when you finish an object and it looks good when you put it in the annealer... It is a really good feeling after that... if you have made a large object where your pulse rises and you're sweating like hell and you have to work for... that's where I have got the kicks lately... physical work... then it's like ready and that is it.

A: Do you have one thing you want to learn that you
can't yet do.

JR: There are many things I can't do yet... today you could see it... There's not really only one thing... I don't even want to say only one. I want to become a broad skilled blower being able to do different kinds of things. And it's still a really long way there... You get that through experience. Maybe thin glass could be practiced... I've been doing more big glass.

A: What is the best thing about the life in Nuutajärvi?

JR: The glass is the best thing here... Maybe I'm a bit solitary type in a good way so in that way this place fits me. Because nothing much happens here... there are not really down sides in Nuutajärvi. Small circles... and that's a fact... and that has its own things... But... you shouldn't take things so seriously.

A: What do you do after school?

JR: Like I said... I've been actually wondering about that... for the past year or actually almost the last two years I have lived a really simple life. The daily rhythm is that I've been here (at the school) till four and then gone jogging and eaten and checked some current affairs program on television and then gone to sleep... and slept really well... and then come back here in the morning... It's unbelievable. Sometimes I laugh about it... I live like this from day to day. I'm quite a calm person... I'm not afraid of routines... I haven't got bored yet. It has kept me hooked... this glass making.

K: Do you have a glass blowing project in your mind that's somehow cool... That's what you want to do.

JR: Well, now I practice this Reticello...

K: What is it?

JR: It is this zig zag pattern... I can't really say... I more like practice the techniques and try to do nice objects. Small glimpses of own things have come up... But courses have been great. Helsinki has had couple of courses... mould course... we got to design our own glass and them we made the mould for it at the mould workshop... and then he had a flat glass course. They are really rewarding these courses that you have a theme and together you look and go through them (the glass pieces). There could be more of those.

K: I agree... What is your favourite tool? If you would have to choose one.

JR: I'm actually just about to order my own tools... but maybe the favourite tool... the jacks are essential... but maybe the favourite is the diamond shears. If you have good handle shears the making becomes quite a lot easier.

A: Thank you.

JR: Thank you. This was a good conversation. So what are your plans? My plans are like these so what have you been thinking?

A: At least we both think that more people should be part of collaboration, doing together. This is at least the topic of our thesis... but after this...

K: We don't like the fact of making own things alone in some studio... that doesn't offer a lot. But certainly something with glass... like with a person like you. I think it has been for a long time now that designers design something and someone makes it... but the maker is totally anonymous... the blowers should be bring out more... of course the same idea... the collaboration can be done with other craftsmen as well.

A: And then more culturally and socially important projects...

K: For us the content is more important than the shape or...

A: I don't want to be a designer who designs a new chair or this or that... I'm more interested in the story... why people do this and what is needed in Finland and what not...

JR: Do you have some fantasy... of some own thing?

A: We do also products... you have to... we can't be too utopian. Like you said about having these two worlds. You do this collaborations and then you get good feeling of your own things and learn what you want to do. For as one part is to make products... maybe more conceptual from my side than Kristo's... but it's a good balance. Then the other part is more of this collaborative... Is it that we become teachers, or more social things or movies... or...

K: Let's first see the reviews of this movie... Maybe the fantasy would be having an own office... but it's not that you just do product design because there's not enough clients, at least in Finland... so maybe the own fantasy is that you have the studio but then do projects that involve people from different fields... glass is so performative so it would be super cool to take glass to a total different surroundings... theatre... to public... like to Helsinki in the centre... that would be nice... then to try it in other...

JR: That's a nice idea...

A: And then we are like the ones who do the research...

K: facilitators...

A: ... and check what can be done and try to get something new.

JR: Markus Vahtovaara, he had this idea... maybe others have as we'll... that you would have a movable glass workshop in a container... that would be cool.

K: And then to show people the magic in glass blowing... in a different way...

JR: That's a good starting point...

K: ... world changes but something stay and has to stay... and culture has to be continued and kept up... world changes, people change... and want new things... so to apply it (glass) to this situation...

A: And I think it's really... I really like to work together with someone who is really good at what he/she does... It can be carpenter or glassmaker... who understands the material they way I don't... what happens when I put water on top of the wood...

K: Yeah, it's nice to challenge the one... who is more close to material or techniques has a smaller vision... the knowledge on those is so big... and when you don't know that much maybe you see more broadly... it can feed both...

A: Both parties learn...

JR: Do you know the Made in Kaiulo (in Helsinki)? You would fit there... because like Tuomas Hervanama... do you know him? He is from Taik and he talked that they have similar ideas than you... joint things... you can do anything...

A: Yes, it is really nice. It has the cafe and some girl owns that and then there's ice cream and some girl owns that... and they all come from different fields... someone makes shoes, somebody fashion... all together...

JR: Tuomas said that there would be... has several times mentioned that there would be a glass hot shop in Helsinki...

A: That would be really cool...

K: Where?

JR: Somewhere in Helsinki. Suomenlinna has a hot shop... but that's quite small scale...

A: It should be somewhere in Kaiulo.

JR: Yeah, that would be nice!

K: I don't know... if you think about all the materials then glass would be the best... It has so many possibilities... the potential is big... but in Sweden they have like, when it's winter, there are small shops (in Stockholm) and then just somewhere in the old town they blow glass... what a feeling, walking there in Christmas, snow is falling and someone is blowing glass... then you can go in and buy something... light bulbs...

JR: Would be so great to blow (glass) in Kaiulo...

K: These activities have come here (to Nuutajärvi) from certain reasons... water is close buy, wood and raw material... but nowadays it's not (the activities) anymore place related... It would be cool to make glass projects
that becomes a bigger social thing but it's made from smaller pieces that can be sold to people...

JR: Sales is crucial... People need to get paid. Nowadays quite well paid...

K: But the idea is that you sell to people a small part of a bigger whole... like you would have a (glass) company in Kallio where a group of people collaborate and make a glass thing... it becomes a whole and when people buy a small piece of it they can be part of the whole... they get a meaning for the piece they bought...

A: It would also probably sell better in Helsinki than here.

JR: That's a fact.

A: It is really good that this (Nuortajärvi) is here and you get inspired here... but from here forward... If it goes to Helsinki from here... it is really good for young designers and craftsmen...

K: Have to come up with something...

JR: Have to come up with something, yes... That's a fact.

A: Have to get money from somewhere...
SH: I had an interest in glass from being a child. I remember at the age of six, I was looking at a crystal piece and was wondering how the light refracted. And then later... or at quite an early stage, maybe at the age of 14, I started collecting coloured glass - surprisingly Nuutajärvi glass - a bit. I felt peace when I looked at the beautiful glass... When living in Sweden I visited a small glass hot shop and I felt immediately that I was home...

I like to share and to talk with people and analyse things... so maybe that’s also a good thing when being a teacher. If glass is something you constantly learn new things in, it is also so in other fields of life. So you should be curious and go forward with a positive mind.

And in glass blowing it is about skills... that is a special skill... it is quite a... you need to do a lot of work to learn it. But I like to compare it to dancing or playing an instrument or performance in sports. In glass blowing you do the work with your body, it is physical. But you also need to have your mind in it and have the skill and knowledge to read the material... You only learn it by doing thousands, tens of thousands of repetitions... to become automatic. I teach in a program that leads to basic education. And it is a 2.5 year program. In it you will get a glimpse of what glass is but the real learning starts after graduations and you start to do it for living.

The skill of doing handmade glass is something so extremely fragile and beautiful... that you have to give it a possibility that we all in our education, that our students would find the joy through making... that it is possible. Nothing is impossible if you just do it... Quite a monologue. *Laughing*

K: If I say one word... what does collaboration mean to you?

SH: I had today such a great experience in the hot shop... Today I felt the feeling of love when I was watching my students working together and how that cooperation worked like... you could say like dance.

A: Like choreography.

S: Yes. But like when you do chair work or you have a blower and the assistant... and when you treat each other and trust that my assistant wants to make this piece as much as I do... then you will really get to do successful pieces. It is not only that I do myself and it is my piece and if it goes wrong it’s your fault... It is not like that. You have to be open and have to dare to let the assistant take the heatings and possible even gather the glass... and... And when that same rhythm is found... I have experienced that on two glory holes two working pairs did the same time perfect collaboration... And it is team work, collaboration... when you get the most. Everybody wins.

A: I saw that three persons were moving in the same rhythm...

K: And breathing at the same time...

A: Like dance. And all the hands go like...

K: It’s one and same organism... How about then collaboration with people from outside... like artists or designers or anyone... how do you feel about that? How do you bring that out or what kinds of experience do you have yourself?

SH: Let’s say that... humm... From the point of view of a glassblower... It has to do with social skills... all these that a person is able to collaborate in work and in free time... It is important in that sense that things happen and they go forward and... if you think about professional collaboration the glassblower is... if the client is for example a designer... the glass blower is the realizer of the designer’s idea, who makes it concrete. And to succeed in that work you have to listen to and discuss with each other... Interaction is important. And you would want to see it happen in other fields as well. Also in our field.

K: What’s your feeling about where the ex-students have gone and where these students will end up to? What’s their direction? Do they start to do their own work or collaborate with others?

SH: I hope that... in the field of glass there has been going on, for a couple of decades already, this so-called structural change. There’s a very different approach... be different most likely. You can say who has blown it. But then I don’t know how meaningful it is to... It can have marketing value in a small design studio or glass studio that this piece is designed by this and blown by that. I think it is one possibility. That same uniform stuff comes out only from a machine.

K: You can also think about director-artist... that director has a degree on directing and acting in acting and they both have their strengths and they collaborate... so maybe how we want to see ourselves... like the director who is more in the background after going through the whole thing... and then it’s the actor who’s on stage, like you (glassblowers) and director... the balance is a bit wrong at the moment in our eyes. But of course there are exceptions.

SH: Everybody should be given the change. And when you have these possibilities then you will... professional skills are constantly developing and... I think the skills of glassblowing has been here a bit lost. But I see that it is now developing towards a better direction. Exactly through this collaboration and openness... And it is extremely important that we have many small companies and not just only one big one. Then one lucky designer maybe gets an idea through. *Laughing* There has to be many options to choose from meaning that then there are lots of different levels (of doing) but that’s only a healthy thing and that takes our field forwards. Open discourse and interaction makes it possible that a glass blower doesn’t... or that there is mutual respect. That is the requirement for a successful work. That you have trust and respect.

K: Have you noticed that if something has already disappeared? Can you name a certain skill or...

SH: Yes, to be able to handle hot glass and mould-blowing is a skill that... sometimes the students do it quite reluctantly that “do we have to do this one and same?” But mould-blowing is important, you have to practice that because when you have graduated and are in working life and you collaborate to get paid... you have a designer coming with a mould... you have to be able to blow in it... It is also an economical question. There’s no short cut. Another thing is to learn to do high-
quality by free blowing... to learn to see the strengths of glass... to see if the glass is distributed evenly. To understand it takes a long time.

K: Have you noticed something the students enjoy doing? Or you? What is the nicest part of the process?

SH: I go a bit quiet now... hmmm... I’m quite critical about it... also self-critical... Yes, when students constantly do something, that they have the hot glass at the end of the pipe or gathering iron... I feel that they enjoy that moment the most... when they can gather the glass themselves, walk to the bench and start doing... then comes the disappointment. “What are you doing?” “I don’t know!” They don’t see it clear because they don’t master it. There are lots of disappointments. That you see a lot. It is quite a heavy school to go through; it is hot, and you’re sweating and it is noisy and lot of hassle around and then you should be able concentrate and make an object. It is a great exercise. I see it helps also later in life to be able to survive these... difficult situations.

K: Would a clearer goal help to prevent these disappointments?

SH: Yes.

K: When you ask students what they are doing it is more a technique they practice but they don’t know what they are making.

SH: Although we have discussed about it (with a student) the own ego pushes through and of course we have to respect that. There has been now two three groups... that the group has evenly developed technically good, better than some previous ones. So they are able to analyse, daring to say “I don’t know”... I don’t know is it our nations thing that you are bit ashamed of not knowing something... So that to dare to be open and to think together... and to think that okay, now we train and this is school so we have the possibility to fail from for example the next Monday till Friday... only do bad ones... that’s how you learn but still you have to be merciful.

A: Are there many applying here?

SH: We have had rather little applicants lately and now we swapped to adult education... and in general the continuation of our program is still open which gives an extra suspense to this fall.

A: What does it mean to Nuutajärvi if this school stops and littala factory stops? Because this village is so affiliated with glass.

SH: Nuutajärvi is Finland’s oldest still working glass village, from 1793. So this year it becomes 220 years since the first hot shop was built here. The fact that glass has been made here for such a long time has brought to this place a huge amount of silent knowledge... that cannot be transferred from somewhere else... And that’s why it is extremely important that glass education and glass making stay in Nuutajärvi. The roots and traditions are important factors.

Surely different times bring changes with them... If in the end of the 18th century... there were certain needs and own industrialization which was even more rapid in the 19th century and so on and so on... Glass melting techniques and the factory management and industrial solutions have changed... what energy source to use and etc. And sales and marketing... have partly affected that at one period glass production has been more and on some period less. But nonetheless glass will be made in the future, sometimes less and then again at some point more. So we can’t afford to end this kind of tradition that Nuutajärvi has. Otherwise you have start again from scratch and do unnecessary work when that work has been done here already for 220 years. Why would you have to start that again somewhere else. Nuutajärvi has its own valuable heritage and traditions in doing. Glass is also made in other places but is made differently and the fostering of the diversity is important... and it is the task of the education.

K: There are changes going on here, EU project as well. What one thing would you change here?

SH: One thing... It is again a sum of many things. I hope this (EU) project helps us to create here an international glass centre. That was my goal when we started to write down the plan for the project.

A: Then the last question, totally different. What is your favourite tool?

SH: I like to do glass so that I touch it as little as possible and of course when handling glass you need to use tools. Some are of metal, there’s wood, there’s paper... but maybe for me the most important tool is air. The air that I blow into the glass but also... air also affects... or how I move the glass... air forms it.

A: Thank you.

SH: Thank you.
K: How did you come here?

MK: Then this was Wetterhoff’s and I got to study here. Then I was interested in flat glass techniques and hadn’t even realized there were such things as hot shop and glass blower. When school started we were the first autumn in the hot shop here at Nuutajärvi... and it just me swept along so strongly that I haven’t since seen other options for me. This has been a holistic thing for me.

A: Can you tell a bit about this school? How many students you have and what are the days like? What is this school about?

MK: At the moment we have 13 students, from two different classes. This year there wasn’t a new class starting. Now the education is under deliberation - that will it continue and where. From last spring to this autumn we have lived in uncertainty and the situation will continue until further notice... But the students have a great passion to do this. There are motivated students who work hard and practice the glassblower’s job.

K: If you want to study glass blowing, hot shop working, where can you do it besides Nuutajärvi?

MK: In Finland there’s fairly little glass education but on the other hand it is a small field so maybe they are in a good ratio, the education and the amount of jobs. This school is a secondary school but all our students have a previous degree - so they are all adults. There’s another secondary school level education in Kihniö, close to Ikaalinen. There’s also a hot shop, a bit smaller working spaces than here and you can apply there straight after elementary school. But these are the only secondary schools (you can study glass in). Then only Aalto University has a hot shop.

We are discussing about losing skills.

MK: It is really difficult to find lost things again.

K: And it is mostly tacit knowledge in the field of crafts.

A: What if this school stops and Nuutajärvi won’t educate anymore, what is the most crucial thing that’s lost?

MK: I see that glass education is extremely Important for Nuutajärvi. This is a small village with long traditions in glass making. But the present is important together with the history, for the continuation (of the traditions) the education should continue here at Nuutajärvi. There’s still a lot of knowledge and skills here and quite a few makers will after the factory will move away.

A: One of the students, Mia, said she feels it is important that you can learn from the older ones. Are the other students, glassblowers who work here and the factory important for the education?

MK: I see it being important that the students study the field in an environment where the working actually happens; there are people and entrepreneurs around who work in this field. Students are not in a sterile environment. Here the making is around them. There are still retired glassblowers living in the village who have done a long career in the factory. So there are stories and knowledge around but it depends on the students how actively they go and find things out and get to know people.

K: What is the most important thing the students should take with them from the school? Or is the something on top the technical skills you and Sara try to provide the students with?

A: Or are the technical things the most important?

MK: It is the basic skills the students should learn here in the school. Glass blowing is fairly challenging and demanding skill, you have to have coordination between the mind and the hands; the making is quite
holistic. And that makes it challenging. You won't learn it in a moment... the basic education in Finland is 2-3 years, which is a short time. So the students have to take it seriously in order to get it in (glass). If you study hard for 2,5 years you can learn the necessary basic skills but it doesn't come for free, everybody has to do it, learn it by doing it.

A: After graduating, what would be the best, to start working with own company or to go somewhere to work and learn more? What is your vision, where do the students go to after this school?

MK: We have different students, because they are adults and they have different backgrounds. So it depends where the student himself and what he/she has done before these studies; what are the realities to start an own company. I don't recommend anyone to start entrepreneurship but it is great if someone occasionally takes that road. It is not easy and not always fun, but it fits some persons but not all. Some of our students continue their studies abroad, some go to university (TaaK) to continue, some change the field - which happens in every field - some go work in the industry which will hopefully happen still in the future so that the industry would stay in Finland and could take new people in.

A: What makes Nuutajärvi special? Why is there no similar place in Finland?

MK: Difficult question...

K: You don't live in the village...?

MK: Yes, I live here. Within a short distance. I feel it is luxury to live in the countryside. I'm terrified by the thought of having to move to the city. It is fantastic to be able to live and work in the countryside; you have your own space and peace although there are people around when and if you need community. It is here. You can choose how much you want your own time or to spend it with others. When there were over 300 workers working for the factory... that's already the number of people living here (nowadays). So this has been in a much bigger scale. It creates community that at least one person from each family works at the factory, and then it is of importance for the people, you are all on the same side.

K: Do you have a favourite place here?

MK: No not really... own home and garden of course. I go a lot to the forest and I fish on the lake Riiatajärvi. When, after a day at the school, you go on the lake it feels like being somewhere else... like on holiday. There are many kinds of people living here who are not necessarily connected expect through glass, which is a big factor. When the group is quite small we are actively doing things here. It partly comes from the concern about the survival of Nuutajärvi and the glass industry; we want to work for the cause. Here you can use your skills in a quite broad spectrum to makes things happen.

K: What is the best thing in glass? What fascinates you the most?

MK: I haven't thought about it on paper to make it sound rational, but it is primarily the feeling of doing. An object can look nice and everyday but you start quickly thinking how hard it was to make or how skillful the maker has been and what has it taken to make it. The most important feeling is the feeling when you are doing (the piece), then it gives you the most. When it's done you might be for moment "yes, this is good, I succeeded", but then the end result doesn't matter... quite quickly you start thinking "what next?"

A: What makes glass (work) good? Can you see is it made by a skilled craftsman... for us it is hard to see the technical things, the differences in the handprint... how do you see if it's hand made and of good quality?

MK: Everybody has their own taste about what attracts, colours, shapes... I don't have so much experience in designing so I observe objects from a perspective what looks nice or has been done carefully and nicely or in a way I haven't thought of being possible.

K: Do you have an example of a project or object that has surprised you recently?

MK: I was really impressed by the glass tree we made in collaboration with our students and the (Tavastia) school's other departments. It was a project that took over a year for us; for which we were blowing here glass balls, in total 1600. That impressed when we installed it last spring outside here in Nuutajärvi. It was such a long process, we planned it for a long time and it was interesting to work with people from different fields. The stem was made by metal students and others also participated in the instame. The balls were blown here in the hot shop always when there was time, so quite often... it was nice to see when we installed the tree for the first time in Tampere that the stem was left a bit empty because we had calculated wrongly the amount of balls... and the empty spot was quite big so we had to go back to school to make even more balls. That experience stayed strongly in the mind, that it was a great night and all the students were making the ball with a good feeling... we were here almost till the midnight. So when the situation was tight everybody was strongly in it... and some students were even dancing during it "laughing". It felt really good and it was an important thing for everybody.

K: If you can describe this project with one word what would it be?

MK: Educational. It was an educative project. You learned yourself and definitely the students learned many things as well.

K: How important was the collaboration (in the project)? With the students here and with the other departments?

MK: I want to believe that the ultimate lesson of this glass tree project, for everybody, is that together we can do great things if everyone believes in the cause. Alone a person can do something but when you have 10 believing in the same cause it is much more.

When you start doing things together you feed each other's thoughts and it grows. If you're along with your thoughts you might not get forward (with them).

K: The students work here mainly in pairs, the other one being the blower and the other the assistant, so we understand. Is that the way you work here?

MK: Glass blowing is collaboration, teamwork. Sometimes some products a glass blower can do by himself but you have to always think is it profitable or not to do it alone, it depends on the product. Traditionally glass making has been chair working, several people work on the same object; there are steps that each person does for the object. And still our students work a lot at least in pairs. There is one person sitting on the blower's bench but the assistant has also a big input in making the work successful, at least as big as the one who sits on the bench.

A: About the collaboration... What do you think about the balance between the designer and the blower; for example littala uses famous designers who design some nice thing and the blowers have to make it accordingly but the designers gets all the fame. It is because of this fame - getting their name in it - blowers want to do their own designs? Is the balance distorted?

MK: It's a complex matter, depends on the scale you start thinking about it with. In Finland there's one big brand that makes design glass. It is a brand that lives on using renowned designers and having certain kinds of objects. Glassblowers are the ones who realize them. On smaller scale there are designers in Finland, who produce their works, series or art, that aren't blowers but commission them at the blowers. It depends on the designer; some bring out the blower in some Instances if the blower's skills have played a crucial part in making the object. Some sell their products under their own name. I think both are good ways, it is matter of taste. What is funny is to hear that people are still amazed about the fact that Olva Toikka doesn't blow the birds himself. It lives strongly in their minds. That Olva Toikka blew the birds himself is totally ridiculous considering the amount of the birds.

A: littala is not playing open cards anymore (not being transparent)...

Discussion moves towards the Industry and designers and how their names are used in branding...

K: This is off the record and doesn't really have anything to do with this...

A: No it doesn't but we can have a discussion...

MK: Well in a way it does. That do you have to bring out
the makers. They are nonetheless in a really important role in being able to produce the objects. For that reason they (makers) should be brought out, yes.

K: Do you see a scenario where art glass could be even done without handwork? That machines can produce art glass in atomized process.

MK: We have been blowing glass for 2000 years and haven’t come up with an alternative technique... so maybe it won’t still happen for a while. Maybe it takes some time still for these glass printers to conquer the world.

K: That’s the fear that people glorify more the technique... We have designed a machine and software that does it for us and we are amazed how beautifully the machine does something... In a way you admire your own handprint... but which is made by the machine or software

MK: That’s a good thought...

K: There has come some mechanical thing in between... you admire more than that a person doing the same thing next you. Maybe we have become numb... I was reading a book yesterday about crafts and it said that crafts got a bad status after the 60’s and 70’s because of certain changes in the society. When it got separated from design and art... It has gotten stuck in between where its status isn’t as high as it is of design or art.

MK: It is true. The shift has happened in that time. Crafts have been highly admired and if you go to museums around the world what they have is paintings and beautiful objects made by craftsmen.

A: What’s the future scenario for Finnish glass? What direction should it go?

MK: Going back to the Industry... It is amazing what kind of machines engineers can make, machines that create wonderful things... But it is about totally different things when a person does a piece from start to finish by hand. The skill is not in the engineer of a machine but in the maker itself. It is a different thing. A machine can produce countless amounts and a person a limited amount. There will be definitely demand for glass made in Finland in the future but the quantities will be tolerable. They are not amounts that a machine spits out but they are often designed by the maker and they are small series, art objects. That’s how I see the future.

K: Do you see that the glassmaker designs his own pieces, or that the designing and making is self-initiative?

MK: The making is not necessarily self-initiative although the designer and maker is the same. I see that most makers also design their own products, maybe not all, but at least some. Learning the properties of glass takes a long time and design students haven’t had for the last years the chance to work at the hot shop, at least not in time-frames you need to understand glass and its possibilities. So many things start from the makers. It is great if there are still in the future designers for who glass is one of the materials or the only material. But often even then they collaborate with glassblowers in the product development. Very few designers in Finland have an holistic understanding, the skills and knowledge, of hot shop made glass. There are some but not necessarily so many in the future. This is not focused on anymore in the design education.

A: How expensive is this kind of community? The electricity, heating... the blowers’ cost. I think when you become a glass blower you choose for a lifestyle, not for money. How can they survive?

MK: This is a demanding field, for the making part but yes, also how to make a living. Being a good maker and having good products don’t guarantee that you can sell these products enough to make a living. Glass furnaces, the bigger ones, are expensive. The maintenance and the parts cost a lot. Big furnaces are constantly on so they eat electricity and the energy prices are going up. So a great deal of the price of products is formed by the manufacturing, energy, rental and salary costs. We have a glass association here at Nuutajärvi that maintain a common glass hot shop. That is a reasonable way of working. I see that in the future there are these small groups of glass blowers that have shared spaces and that share the costs. But it still doesn’t make it easier; we have small markets in Finland and it is a lot work to get the products on the market and to get people to buy them. Every entrepreneur is still doing the pioneer work, there are still many people who don’t understand the difference between glass objects - how and where they are made, Finnish or foreign, handmade or machine made. Maybe the increase of this awareness will open up more markets here in Finland.

K: That’s what we are trying to do... I have three questions. Back to the status of crafts, that why it is meaningful. You said it is important especially for the maker, what the feeling of doing and succeeding gives. I feel that the challenge is how to get the sales value; how that same feeling, that the maker has, transmits to the buyer? How to make the value of the making as a value to buy it?

MK: That is a really difficult question: what extra value it that the buyer if a craftsman has made, or is it a question of appreciation. If someone doesn’t appreciate handicraft can that... Well maybe you can tell about the process (of making the object) and open up the eyes - to show what the making is. Through that it might happen (the appreciation)... might...

K: It’s true, I agree. That’s why glass blowing is great because the process is transparent and for example here you keep the doors open and people are able to see the show. There you see the makers, the processes it takes and the environment it’s made in. That’s often the thing with crafts... the decision to buy is based on emotion... and to get the (emotional) trigger, when making that decision, is hard if you don’t see or now or understand who has made it and how. This is a good way here to sell the products (in the school next to the hot shop).

MK: The school’s location has a great meaning and that we have the doors open and people are able to come in and follow the making. People need to know that there are still products made by hand in Finland and that there are makers. For the new students it might be exciting that there are people watching when you’re practicing something important and falling many times. But it is important for the future that we’d had the doors open to increase the awareness... and that the field of glass still exists.

K: Do you try to teach students how to increase the sales, if they decide to start doing own things? How to sell them or how they should then be like? (So, Kristo, do you teach branding and marketing?)

MK: The students have the possibility to take studies on entrepreneurship, at the main school in Hämämäinen. The ones who are even slightly interested in entrepreneurship should definitely take the studies. After these studies, although having a clear picture of what kinds of products to do, it is not easy. It might take years for some before they find what they produce, that looks and feels own.

K: There are also designers in the Lasikompania, for example Heikki. Do you see, together with Sara, that it is important to show the designers or that side of the possible future collaborate?

MK: The collaboration with designers is very important. There are makers who make their own designs but then there are also very skilled makers who don’t have the urge to make own things but to realize other persons’, most likely designers’ ideas. It is important to realize the possibility of this kind of collaboration already during the studies.

K: What kinds of teaching methods you use?

MK: I’m not aware of that...

K: How does the teaching happen?

MK: It is making in the hot shop... should probably think about these kinds of things... you do without being discouraged and you have to do the mistakes, sometimes many times. You have to go through almost all the mistakes before you find the right way. Sometimes you might learn a bit from other persons’ mistakes but everyone has to make a lot of mistakes in order to find the right way. Maybe you just encourage (the students) to make and try and continue doing, that you can’t be let down by the mistakes.

K: Do you have a piece that you try to reproduce or show a technique that you start then practicing? That you show an example with Sara and...

MK: For example like that, yes. When doing mould blowing, there are some thicknesses you start trying to achieve. Many times when we start learning new
technique we do an example and same start repeating the same piece and same use the technique to another object. There’s no rule for it.

K: What makes Finnish glass Finnish?

MK: Finnish glass is pure-lined and often still minimalistic. Many countries produce really great glass and Finland is one of them but what is then distinctive for a country is not always so obvious.

K: What’s the strength of Finnish glass compared to Murano or Danish or Czech glass?

MK: If you think about Finnish designers, artist, studio glass blowers, we have quite broad array of them nowadays. They are not from the same mould the products. There’s restrained and flashy, colourful and bright... Maybe a designer sees these things better, that if there’s a red line somewhere...

K: Talking about Finnish Design Yearbook... they select certain kinds of things because they’re building the image. Although there might be a broad array of things but what’s picked out is how they want to promote Finnish design. It’s also a question... what many Finnish designers are involved with... because it is about Finnish design... not necessarily art...

Okay, the final question. One thing you would change in this village?

A: And I have a final, final question.

MK: One thing that I would change here... many small ones but one big thing... the things you hope to be changed, they are all small things and related to the continuation of glass making here at Nuutajärvi and all the things that are related to it, continuation of the history to the present day and the future.

K: Say one small thing.

MK: I hope to find the good fish spots in the lake.

A: I have the final, final question. What is your favourite tool?

MK: Glass blowing pipe is needed but I have the closest relationship to the steaming wet piece of newspaper. That’s the nicest thing to be able to mould the glass with it.

A: Thank you.

MK: Thank you.

A: When did you know that you wanted to come here?

MK: I have probably always thought about glass in someway... I had always liked glass objects and stared at the fire... so it was always in the background as a thought... that glass blowing... that “oh, the lucky ones who can blow glass” and how nice it would be able to do all those glass objects... Then there came a point in life where you had to re-think all your decisions and choices... and I just decided that “who cares”, at least I will try. Better to be a glass blower for at least a while than never.

A: Did you already have, when applying here, a vision what you will be?

MK: Well, no... I didn’t really think about it at all that what then after graduation... Of course the employment situation... like in every fields but especially in glass blowing... you knew that there wouldn’t be jobs waiting for you in any way... But maybe life is just too short to all the time think “what then?” “what happens then?”

K: Now that you are here and this is your... third year... do you still feel that this was the right decision?

MK: Yes, I still feel that it was good choice to come to this school and see what glass blowing really is... And I hope this will continue the same way (for me) in the future. Will I become a professional blower... Probably this will become an expensive hobby. Even part time work is... well, wishful thinking. But if you could sell that much that you could always do more... that would be good at least in the beginning... hmmm...

K: What would you then do? Is it your own glass or together with someone else or for someone else? Or in the factory?

MK: Mainly own things. If you’d do it as a part time hobby way, then you’d rather do works that you want to and can do yourself... Of course some commissioned works... But I’m not that interested in doing glass at the factory because it would be more basic things, at least in the beginning. Of course the more skilled ones do more. I don’t know how much they do by hand at the littala factory, except Olga Toikka birds. It is mostly automated.

K: If you do (glass) by yourself... would it be in the hot shop, with hot glass?

MK: Yes, hot glass in the hot shop. Rarely you do it completely alone... you should then have an assistant.

In that sense it is fairly much teamwork...

A: Do you think, after graduating from here... after these 3 years, you have skills enough to do your own work... or do you have to go somewhere like in the factory... do you need more...

MK: For sure. You are never really finished. Surely even the blowers who’ve been working for years, learn and want to learn new things. And if you have made for example a lot of thick glass, heavy objects, and then have to start doing thin glass... which is completely different. Then you have to sort of learn many things again... In the doing... I don’t believe anyone is ever fully ready. I’d say that you have learned the basic skills in this school but always you can learn more... you are never fully ready.

A: Do they learn you in this school to do more art glass or utility glass... or is it more about techniques?

MK: It is mostly technical because... even in art glass you have to know the techniques. But we are quite free to choose whether we do art or utility glass... We have sometimes had certain tasks like to make a specific shape. But basically what we decide to do in the hot shop is up to ourselves - Is it then art or utility glass. I’d say that both of the ways are supported and we have many glass designers here whose work you’ve been able to watch.

A: Are Sara and Marika checking more your technique or the outcome?
MH: I’d say they check more of the technique, because that’s what you can… of course they also look at the objects, but they put more emphasis on the technique and that we can do them in the right way.

K: Have you done projects with designers or artists (who are here)?

MH: Yes. The first year we had a mould course by designer Heikki Vilnikainen. We learned a bit how to design the mould and what designer does before meeting the glass blower. Then design students from Metropolia have come here with their moulds we have blown them then.

A: Then a bit more about your own blowing… we are really interested in what kinds of tools you use and why you are important to them?

MH: Well, certainly important for every glass blower is the diamond shears. That is the most important tool to be able to create different things. If you have to choose only one tool to work with then jacks would be the first option. Then of course tweezers and blocks are also important… actually there are quite many of them (important tools). Some use more tools than others, it depends a bit on personal preferences. I myself try to use as little tools as possible to shape the glass.

K: Why do you try to use as little as possible?

MH: Because the tools always leave a mark when you use them, scratches or so…

A: If we now think about Nuutajärvi. Why is this area so important for this school, what makes this special? What is the community here?

MH: Nuutajärvi is a small village, so everybody knows each other and almost everyone are involved in glass - either ex-blowers or the family of blowers. Glass is the unifying thing. And as a student it has been great because the glass artist and blowers, and the factory as well, are here. Being able to see what they do and how they do it has helped many times, plus if you need help you get it quite easily and if you are interested in something people often share the knowledge and skills. It’s quite sad that the school is (probably) ending

K: Our biggest fear is that the knowledge stops here and then you have to travel elsewhere for the knowledge and maybe the factories will travel elsewhere…

A: Then that’s it.

K: You said you were interested in glass objects and the glowing fire… Was it in the glass that entralled you?

MH: It was the material and glass itself that fascinated me.

K: It wasn’t like the classic Aalto vase?

MH: No, it was not the designers that… I didn’t know any blowers by name… designers you knew and their designs… But for me it was purely about a beautiful glass object. The designers were ultimately secondary… but they had produced something beautiful.

K: What inspires you to make a certain kind of work. Where do you get the force to do it from?

MH: Well, quite often my own inspiration comes straight from colours. I don’t know if I can think about some artist or painting… sometimes you see after finishing (the object) that it reminds something… Often you look through these books we have here, if you’re out of inspirations, and look what’s been done before and then try to learn that technique and find your own way of working. You can’t ever do the same.

K: When you do your own work are they more art glass or utilty glass?

MH: Utility glass… but it is a thin line the line between what is art and what is utility glass. Some piece can be art piece although it is a utility piece. Perhaps I do more utility objects.

K: Is the colour the defining factor in your works. Does it start from the colour?

MH: Quite often, yes. Often also the glass itself determines… you might have a plan but it doesn’t necessarily go by it… you have to improvise… It depends what the glass wants…

K: You have to listen to the material…

MH: As a glass blower you have to find a sensitivity to glass. Of course your own way of doing but also listen to the material.

K: Is there a certain movement or part of the body you have to control straight in the beginning? I heard that the back has to be in a certain position…

MH: That is quite important. Keeping the posture and maybe balance is the most important thing. If your balance is off you can hardly control the work to find the balance. These are the first thing you learn and then to tolerate the heat, you have to learn to stand the heat. And then controlling your own body, to move swiftly but calmly.

K: How do you train these things?

MH: It just comes through time. The first times when gathering the hot glass from the furnace - although you knew what to do and where to go - your only thought in front of 1200 Celsius is “I’m burning!” Then you just get over it and don’t even think about it anymore. You just go there and gather the glass.

A: Again about Nuutajärvi. If everything stops here, you couldn’t gather glass here and live here anymore, what would you miss here?

MH: If Nuutajärvi stops for good… hard to say one thing you would definitely miss from Nuutajärvi. Maybe you would miss the potential… that was there. There’s a wonderful traditional village that has already buildings from years back and knowledge that has gone from generation to generation. If that just stops it would be quite a big loss. It is sad that there are these old buildings that are already collapsing.

K: Fiskars owns them. If they don’t want to fix them…

MH: Yeah… They haven’t wanted to do that for years.

A: We heard that it’s also that they don’t want to have competition.
K: That they don’t want to sell it (factory) away. Someone might start a competing company... But maybe I see it that it would shift from factory activity to a completely different thing...

MH: That’s what I also hope. I want to think that it might be a good thing that the factory stops because it gives space to something different. But we shall see what happens.

K: Do you have an idea what direction glass making should go in Finland? Where would you like it to go?

MH: I hope that people would start trusting their own taste and buying objects that they consider beautiful, not because someone else thinks they’re beautiful or they’ve been sold and bought a lot. It would be great if unique pieces would be more respected. That’s the direction I hope things will go. I like to do unique pieces. “Laughing.”

A: But it is true that now the quality is missing. It’s the design that sells. But the quality is not linked anymore.

MH: I feel it’s really sad if you go to a flea market and find a really nice piece that you, as a professional, can see is handmade and taken a lot of time to do... and then they sell it for 2-3 Euros. And then there’s a machine-produced Iltala’s candle holder that is sold for 40 Euros... It is a bit distorted.

K: Why is that handmade piece so much more cheaper compared to this industrially made?

MH: People like that there’s a name, like a person... For example I think there are a lot of people who buy Olavi Tolifica’s birds thinking he did them himself. He has designed them and put work and effort to them but he has probably never touched a (blowing pipe). Someone else has made the bird but there’s no mention of it. Like I said, when I came to the school I didn’t know any blower by name. You would hope that the work would also get credit not only the designer.

K: Our initial plan was to come here to make a project where the makers are brought out. We as designers (would) design a platform which creates something that looks like the blower.

A: They will be different. We are interested in the handprint of different blowers.

K: If you could emphasize that. Because, as a non professional (in glass), I can’t say of an art glass piece what techniques have been used to make it or how hard it was to make it. Or is it even handmade by someone.

MH: That’s true. It is a bit difficult to see.

K: To be able to show to us ordinary people that someone has actually done this. But it’s true that often they ride with the designer’s name...

MH: And I don’t want to belittle the work of a designers, it has its own demands and process... But it feels a bit distorted that it’s only the designer...

A: It’s not matching at the moment. The glass blower and the designer... there’s is no match... and that’s the whole problem....

MH: The balance is lost.

K: Design has become something special... of course it needs work and time but... but this is so different, physical and skill demanding...

A: It is a bit from two sides, it’s hard to find the balance.

K: There’s always the golden mean. That’s missing from many things.

A: At the moment it’s totally not connected...

MH: And in Finland especially. There are places abroad, for example in Venice, where there are very renowned glass blowers. In Finland the designers have a strong history. In art glass it is not necessarily the same... maybe that side could come out more in Finland.

A: Do you have a last question, Kristos?

K: If you could change one thing here, what would it be?

A: In the village or school. It can be small or radical.

MH: I don’t now, maybe I would fix all the buildings. They are all collapsing... They haven’t been maintained for years... That would be one radical change, fixing all the buildings.

A: Thank you.

MH: Thank you.
HVI: Why I came here is simply the glass material. I studied glass and ceramics in Kuopio specializing in glass. And when there I did my internship here at Markku Salo’s studio (Muuhotuone Oy) which is also specialized in glass. Through that I got to know Laskimopanna, glassmakers and blowers and also some designers who work here. That’s how I found this place.

K: Do you consider yourself as a designer or glassmaker?

HVI: I do mainly glass at the moment but I haven’t intended to myself that I would do only glass. I have also done exhibition design but all the other design task have come in a way through glass, it has brought other kind of work but also related to design. Everybody has their own thing (material), plastic or... but a good object is in the centre... I wouldn’t want to fall for object worship but glass is so inspirational and gripping that I believe If you as a designer get into glass it’s hard to let go of it. It is a tingling material; you’re always left with a spark after finishing one project. But in that sense I regard myself as a designer.

I have been focused on glass because I enjoy working with studio glass manufacturing. It has this social aspect; everyone’s presence is needed... that is more rare nowadays. I really like the teamwork aspect in glass, you encounter different makers and opinions; the doing is interactive. You learn a lot about ways of doing and about people, you see success and failures. In that sense making studio glass is nice. It allows for a personal touch.

You can give glass only the shape but the inside can be flexible. It is like the sea: it is quiet on the surface but inside it things happen all the time. And that’s a good stimulus...

K: When making your designs do you collaborate with a blower?

HVI: I hire the blower for a certain project. I have at the moment two regular blowers I have worked with. I don’t have a specific blower partner. There are young blowers here and Laskimopanna’s makers and Laslirius do a lot of commissions. It depends on the piece. Usually blowers have their individual strengths, some want to do thinner and lighter and some are able to do thicker. To be closer to the furnace was one of the reasons to move here... I feel it’s important that the designer is close to the “factory”... it’s an old fashioned view but I like it.

A: How important is the village in that there are people who live here and are involved in glass?

HVI: For me it has been especially important. That there have been family members from different generations working in the factory, that it has a 220-year-old road. Professional skills come from there, which passes on from blower to blower. It has been this apprentice thing; blowers go to work in the factory and learn things from each other.

A: What is the future of Noutajärvi and what is lost if the factory and the school both stop?

HVI: First of all some jobs are lost, which is a great pity. And of course part of the identity of the village is lost and it has been important for the village... But of course these things happen on every field... manufacturing is being made more effective. On the other hand the production is automated more, pressed glass made by robots. The production process has changed a lot; you don’t need people anymore... except in art glass, unique glass... Art glass is moving to smaller studios, to studio glass making... Of course I hope that art glass would stay in the bigger industry... (Art glass) is a great asset and it has been a big asset for the industry, to show what the designers are capable of in the field of art. I’m most upset about the disappearance of the professional skills. But this is how it is... Big, efficient industry works with different terms than craft industry... But I feel positive about the art glass. It is doing really well in Finland and especially in Noutajärvi. I don’t see any reason for that the technical execution wouldn’t be possible nowadays, we just need good designers and artists... there should be more of those.

But glass is such a challenging material and you have to practice the making through the material... so the expenses are rather high. You used to get more time in the hot shop so you could develop in the making... It has to be really selling and good and meaningful art glass... and it is really hard to start doing it as a designer just because of the money... We need a lot of time to practice. Designers just have to have the courage to take that path.

A: How do you get designers and artists here to take advantage of the knowledge and skills?

HVI: Well that’s the whole thing... From the ones that come here to do unique glass there are only a few from the young artists. How to tempt them here? I think this school is a really good element for that. To build networks between glass making students and designers. With strengthening that I believe you can make really good stuff. And then that schools would have hot shops - like your school. It’s good to approach glass through making...

Interesting times we are living in... a transition period going on... but I’m looking forward to it... But it would be nice that younger people would get excited about glass. We have such a great history in glass. And the Finnish glass museum is one the finest museums in Europe. Glass design has been important for Finland and the pieces done back then are really exceptional... I hope glass will lift its head up. And art glass has quite a good demand. The exhibitions of the glass artists are doing well... I feel positive about the future.

K: What is the best place here in the village? What makes it special?

HVI: For me it is the peace. This is a really good environment for concentrating on your doing. And I like fresh air. This is a glass village and It is a good place to come and make glass.

A: Is this still a glass village after ten years?

HVI: For sure it is. I think this is a vibrant glass village. But it needs effort.

K: What about the EU project, do you see the impact already?

HVI: The “head of the village” is working on the marketing of the village. The project is mostly aimed for marketing and events. I think it will create a spark to get things going on. But there are many things... the estates are in bad conditions and so... There’s a lot to do here. But you can’t get the history that’s here by buying. By enlightening the history and with nowadays communications you can... this is a place worth seeing...

K: What process (in glassmaking) intrigues or inspires you the most?

HVI: Well, it’s as crazy as that my previous works sometimes inspire me. Many of the designs I continue with. In general I design by drawing and thinking how to brief the blower. I don’t necessarily do a technical drawing, except for moulds. I might start from a shape, like a cylinder and then fill it with something. And that you do for one day and then I analyze the results and change it and try different things. The making is sometimes like searching. You could say it’s like a painting, when you start painting you never know how the painting will look like in the end. You think the image looks like something and then it turns out to be something else. That’s the appeal of it. But although it looks different the maker should be satisfied with the result. Then you forget what you were looking for in the beginning. So where the inspiration comes from is a difficult question... it changes. For me it is the result of imagination and what you experience and see around you.

K: Do you think collaboration is Important, should there be more of it, should the students here learn it before graduating?

HVI: I think it is really good that blowers don’t do objects only together; they get the technical skills, fairly good ones in this school. But what is the end result, what cultural context is the object made into, where it is used - these are the things they don’t go through that much in this vocational education, which is an obvious thing. That’s why it would be nice that there would be more collaboration with the designers or others. Then the design and making of object would be more broad-minded. It is not relevant if the designer proposes
something ridiculous that is difficult or ridiculous to make, I think it is desirable. That teaches the designer to do better decisions. In that sense glass is a good teacher in design - you learn that when you do things differently it is less work, like practical things... I think it would be really great to have collaboration because designers have a broader view of the world of objects. They manage the technical things here.

A: Because glass is so expensive (to make) would it be good to have collaborations (commissioned work) and then do your own things aside?

HV: Industry is industry and designers are “harnessed to use the machines” in a way. But the industry doesn’t always have to be so huge; one company doesn’t have to make all the glass in the world. What designers give to big companies is the marketing value, what smaller companies don’t have resources for. I’m not so... I collaborate with any kind of industry, well not war industry... but so... Industry and technology is really interesting because it is based on getting it fast and cheap.

A: Do you think that it is difficult for younger designers to get their things out? Is it still more Wirkkala’s and the 60’s things?

HV: It’s of course boring if you ride with the fame (of the glass from the golden age). I think it is a bit too safe. I crave for risk taking ability and that the younger ones would get more chances. In glass the industry won’t get anything if you don’t give the young ones a chance. I hope for more open interaction from the big industry towards young designers. I’d say openness is the best. Take Interns and then the ones who have worked in the company would collaborate with designers who don’t have the connections, that it wouldn’t become this inner circle network... That they (companies) try to be the best and try to find the best designers and not the ones who look best in the picture. They don’t focus on what’s essential but more on the designer’s brand value.

Designers should be challenged in their skills not their branding capabilities. That’s going a bit to the wrong direction... open-mindedness... Some smaller, lighter series should be done next to heavy production, in which designers would change, they could apply for and there would competition. I hope there would be more of this. It is so minimal nowadays. Finland has so little of industry. I also think that if you don’t get in then you start manufacturing yourself.

The golden age hangs as a shadow behind the glass industry... I don’t see it as a shadow... we should learn from the old guys, they were really good. We should be aware of what they did and not just remove it but to market with them in front is a bit... There could be this courage...

A: Is there something else still or... That was quite a lot already...

HV: But it is true that there are a lot of designers in Finland but few designers manufacture themselves but rather try to sell to big and already known brands. It is a long but not impossible path to create your own brand or so... you need to have more courage and resources. Nowadays the communications is so effective that it is no problem, if you have a good product, to publish it yourself. Of course you need to have a good product and believe in it.

I don’t know Harr (Koskinen) but I know his work and I think Iittala might have a nice future him being now the design director. It doesn’t necessarily look bad there... But I encourage to do yourself... the bankruptcy doesn’t feel so bad... “laughing”... Finland needs physical work, small things. Then it is easy to go to exhibitions and you don’t need huge amounts (of products) to get the thing going. Of course it depends on the product, is it electronic or... where do you need to get the knowledge (components etc.) from... It can be challenging if you don’t know who can make this and this kind of piece. It can be quite difficult.

K: It would be good to stay local...

HV: What kinds of plans do you have? No plans?

K: Yeah, Janne asked the same...

A: Now there are quite a lot of tourists, they come also to see the Iittala factory... you can maybe soon see the impact (of the closing of the factory)... it doesn’t only influence the factory workers but it influences the whole village...

HV: Is the camera filming? One of the biggest problems here in Nuuvêjärvi is that the estates are owned by Fiskars, the factory, this building. And because the buildings are in bad conditions and people are anyway renting them... it is clear that the whole system is still in the seventies. They don’t take care of this and don’t focus on fixing places and marketing it. All the resources have gone to Iittala. This was Nuuvêjärvi Lasi and it ended up with Iittala under the same company and all the products moved under the Iittala brand. Fiskars has informed that they make objects; they are not focusing on estate or cultural tourism business.

And then there are the tenants and it’s a bit of a stand-off mode... you can’t do anything to fix things. Before when it was Nuuvêjärvi Lasi this place was marketed around the world, “come to Nuuvêjärvi” and so... And Fiskars doesn’t do that at all anymore. Now when they are leaving the situation might get even worse... one option is that this old hot shop is going to be for sale. There’s should be a group of entrepreneurs or an organization who would take over this whole place, and decide that this will become an attractive cultural centre - like Billnäs, the place has a CEO. I’m just talking about Nuuvêjärvi or about the liveliness of this place... you have to renovate to make it nice to work here, to make this an attraction and then market it. Think about it, this would have everything... this would be a great place for an entrepreneur... there’s the history, Kai Franck, the museum, the studio glass... this is an amazing place...

A: Who could by this?

HV: That’s a good question. It needs a lot of money but also a vision about the historical value of the place.

I think they (Fiskars) are so cold-headed that they will sell it to anyone who has money. But you’d hope that the buyer is someone who sees the history... same recipe that with Billnäs... history is the strong point... And something needs to be done before the whole hot shop collapses. That’s again something. Fiskars should learn from the Swedes who have set domestic tourism as their main economy. Here the industry is leaving in quite a fast pace, we should get some energy here... We have clean nature, lakes and so, and culture that you can’t subsidize...

I hope that the village gets such a buzz going on that people get interested, to get the place fixed and marketed...

A: It’s funny that there are historical things here that are not being brought up, like Kai Franck’s house... It’s a bit of a fear if this whole area becomes a museum... that it’s too late... tact knowledge is already lost... this village is so important because people learn from each other...

HV: It would be really nice to have a carpenter here. We have a blacksmith here, you can ask about weaving from him. So in that sense it works well.

A: And then if the school will...

HV: I don’t know about the school’s fate.

K: No one knows...

HV: It’s a pity if it stops. Then it’s in the hands of faith...

K: Where do new blowers come from...

HV: I don’t know how it is now but Iittala has this apprenticeship program, 2 blowers run it at the factory...

K: Is it for the art glass?

HV: I don’t know how the Nuuvêjärvi art glass, when it moves there, will be (integrated)...

A: Then Iittala decides what they learn and what is done... for their own purpose... of course it’s nice for them if they have all the knowledge...

HV: I have nothing against Iittala and their business but I’d hope that they would pay respect to...

A: They should be more responsible...

HV: I’m not nagging but it would be better for the designer. And it could be even quite good the future for art glass (in Iittala). They have the Artworks. Maybe they will improve on that and not just make pressed glass. You don’t know...
K: It's a fact that the starting points for making art glass are different here and in Littala.

HV: Yes, yes.
K: Let's see how it goes.

HV: Glass industry has a lot of pressure and it relates to the energy, prices of gas and electricity. It's one ruling factor.
K: And Finland doesn't really produce much of it's own energy.
HV: And for example IKEA manufactures glass in Russia that looks like mouth blown.
A: In China also.
HV: They (Russia) have their own energy so it becomes more cheap. They (IKEA) sell mouth blown wine glasses, 2.50€ a piece.

We tell about the Dutch program showing the manufacturing of these wine glasses... 28 people doing one glass...

HV: Yeah and it's based on the poor (social benefits)... there's no pension... or pension insurance.
K: And they have people...
HV: Yeah, and then in some textile factory they get like 75e a month... think about it... It's crazy. It's so insane.
K: I feel that people are used to see so much industrially manufactured stuff that they don't see the difference. Especially if IKEA can manufacture (the wine glasses)...
HV: It is so infuriating, it is such a bad quality. And then it's allowed to produce these, no control in it... where do the sneakers come from... There should be some sense in what kind of stuff is brought here from the other side of the world.
A: Some people just buy it.

A: What is Lasikompania?
TS: It is an association where the independent glass artist share the hot shop and also sometimes work together outside the hot shop...
K: How did you find this place? Why did you come and study glass?
TS: I was studying electrical engineering in Tampere and then at some point got frustrated with all the calculating and the field and started questioning that doing. And then I heard from my friend, who had started here, that there's this glass blowing school. I was traveling for a year and when I came back I applied here just as a joke. But the glass just took a hold of me and I got totally addicted to it - it is such a different material. In the beginning it felt that how can you blow anything but suddenly, after training it, it clicked. Then I just somehow stayed here...

K: Is the reason you stayed here that you've seen Lasikompania working or that it was easier to stay because of the functions that are here (factory, school, Lasikompania)?
TS: I didn't even know where you could study glass blowing in Finland before I heard from my friend Erno Takala that there's this school... and I can't imagine of putting up your own hot shop because it needs so much to keep it running and together you can share the load and the high maintenance costs. Without this possibility I probably wouldn't be doing glass. Maybe the main reason of staying here is the glass. Here you can be yourself and do what you like. The people in the end make the place...

K: Did you have any idea about glass and glassmakers before you came here?
TS: I have studied natural sciences, physics and chemistry, which are very apparent in glass... The rotational movement, masses and temperatures... It was a fascinating material... even though saying that I applied here as joke I thought that I get at least an expensive hobby if nothing else...
K: You can also play golf.
TS: You can put the money into any other thing.
A: It feels that it is an expensive hobby for many. What if you want to make it a profession, are there possibilities for that in Finland?
TS: Yes... by being in a group... It is quite hard if you put up your own hot shop and start blowing. You can make a living with that but I feel that nowadays it is more possible through associations like we have Lasikompania's hot shop. And then Lasismi in Riihimäki and Verstakko next to them. Through that opens up a possibility to make profitable business. And I believe there's a demand for art glass in Finland, although it can't compete in the price with mass-produced glass. There are always those who want something else than the things you can get from the stores.
K: Lasismi is a good example. You talked about nature, it is quite a nice theme. Is your source inspiration or do you have other inspirations like movies, art pieces or other people or techniques?
TS: Maybe it is based on technical things. You rarely draw an idea very accurately and if you do see it quite quickly in the hot shop how it really looks like. The techniques dictate quite much how the glass will look like. And it is fun to apply old techniques to this day, to add your own thing (or joke) to it. There's not one specific source of inspiration...
K: Do you have a good example of a collective activity related to glass? A school or a factory?
TS: If you think about it from the perspective of the visitor then there's the Glasriket (Kingdom of Crystal) in Southern Sweden. There are Kosta and Boda and Orrefors. Glasriket also includes all the small hot shops scattered in the woods and it felt that they were doing
well. There are many different operators who do their own thing, and of course - in a Swedish style - all the buildings and etc. are f.l.t.r.

K: What about Nuutajärvi then? The factory goes and if the school goes, what is then the future for Nuutajärvi?

TS: It’s hard to talk about the vision because you never know what’s happening behind the scenes. But I hope that the school would continue and get a stable position because that’s one of the reasons I have come here myself and many others too who blow glass here. So the school is one of the things that bring people to the village and the field of glass. In a broader view I hope that the village would remain and become more vital that it now is. Although there are a lot of things happening here related to glass maybe if people would come more to enjoy the things Nuutajärvi has to offer, other than glass blowing. Would be really nice if this developed to a bigger craftsman community.

If you think that the glass school would end the scenario is a bit scary: where are the innovations and the new studio glassmakers coming from then. And studio glass has an important role nowadays from the point of view of design, that you don’t have to make everything to fit bigger industrial series that have fit the quartiles. That you can afford to do test which bigger companies don’t have anymore.

We are mentioning about reporting on glassmaking because of being outsiders ourselves – to create awareness.

TS: We have heard a lot that it is hard to get to blow glass... Jenni (Amorphia’s second member) is a designer and also did this glass school... we try to make it more approachable (to come and blow)... so that there wouldn’t be more barriers than the costs. Would be nice to give young designers the chance to get to do glass. In the future it will be more difficult to get to design for the bigger industries... so this would be a glass studio, laboratory where you would have an easier access to work with glass and to do in collaboration a project from the first sketch to the final piece. To collaborate also in the design process, to say what works and what will it look like. I see that they’re more and more collaborative projects. I see myself more as a glassblower than a designer and what the glass blowing needs in the future is collaborative projects... what is possible and what is relevant for the design... or something like that.

K: True. You think the future is in the collaboration and joint projects. Is it possible to do bigger collaborations here, have you had any plans to do these kind of things?

TS: We have been thinking now for a year - with the EU funded program - what else has Nuutajärvi to offer than the glass pieces. And we had tried to open the village for visitors from outside or to make them feel less as outsiders. In a sense everybody can participate in this village and I’m fascinated about the fact that people would get to try glass making with their own hands... That it would become more transparent what glass actually is. That people would see more than only the finished objects. We have in Amorphia (Tero’s and Jenni’s company) this thing that we start publishing stuff already in the sketching phase. And a part of our collection has been done in collaboration with the audience; we ask people what direction should the pieces been taken after the first tests. It has a more collective background... because you can’t do bigger series only for yourself, you have to do it for the need that already exist. You can’t go with the object in front. You would like to answer to the need because nowadays there’s already so much useless stuff... functionality is in the end behind everything else...

K: Is glass for you a material you make objects from or is it also something else?

TS: It (glass) starts to be already on a pedestal nowadays... after playing with it for a while and encountering different situations with it... You start regarding it as some sort of occult... It is a bit like alchemy, to make gold from sand... you have all the techniques etc. but it feels like that even God doesn’t know how it works but this is how it has been always done and that works... But on the other hand glass becomes more mundane, it’s not a horrible thing anymore if the glass breaks... At the same time it is a material you can express yourself with, within the limits of your imagination and skills. It is on the other hand just a material to make stuff from but then again also a material to channel your self-expression through...
K: What would hope that the object (when finished) would give to the user? What values the objects encompasses?

TS: Glass is such a visual material that there’s always the aesthetic side, my own works might sometimes be on the border of being aesthetic or not. If you think about utility glass there’s the positive feeling... that it feels good to use... I don’t know...

K: Is the feeling of doing and succeeding important for you or...?

TS: It’s mainly the process and maybe in the end the succeeding and overcoming yourself. On the other hand if you have an idea of a piece that pleases you and at the same time if fits the purpose...

K: Maybe the core of craftsmanship is in the making, that you make something you have imagined in your head or on paper real with your own hands.

TS: It is quite a winning feeling when you’ve filled the annealer full with stuff. It is quite addictive stuff... the trip from the first tests to a fluid process. The things you do can’t do them alone so there’s also the feeling of doing together and you create a tight bond with the fellow blower. So the other side is that it is social making - glass blowing is a team sport.

K: How can you transmit this feeling of making and succeeding to the customer, how can you see - as a non-professional - the making (the object) has taken time, passion, sweat and blood?

TS: In that sense Nuutajärvi is a fantastic place; you can just drive your car here and come and see people working with sweat and then grab a coffee... and maybe get the wine glass (the blowers have made), if it feels right... But the customer easily sees the finished object without thinking more about the... It is hard to make an object smell like sweat without strong branding...

K: Maybe glass blowing is so performative and impressive that it is easy to show it.

TS: People seem to be interested in the making. Some blowers are disturbed by observers, it takes it own part to watch that people don’t walk to the flames... I think the interaction with people is one of Nuutajärvi’s benefits.

K: What would you change here in Nuutajärvi? Someone would fix the buildings...

TS: That’s a good start. Although I like this rugged environment, the time can be visible. But they should be kept in a condition that people can work in. I would start bringing diversity here, there’s power in a crowd. Different crafts support each other. If we want to do more than hot shop glass and have a tourist village we should start offering different things, experiences - other than seeing the environment and the making. But otherwise it’s quite good as it is...

K: I also like rugged more than slick and modern if it doesn’t collapse from inside.

TS: Yeah, it’s starts to be in that point. There are good working spaces downstairs over there but I wouldn’t dare to go under the roof.

K: Do you have a certain technique or process you like in glassblowing?

TS: I’m fascinated by the old techniques that are witty, e.g. from the Roman times. And then the Venetian techniques like blown foot plate. I had a period when making a blown foot plate made the object more fun - for example when making a jar you just stick the foot plate there just the sake of it. But mostly, if not doing some complex techniques, the less you sweat... the less you sweat.

The history is a strong source of inspiration. Sometimes you feel that everything is done in glass, nowadays we just modify it to suit us. Take Olva Tolkkas’s birds, similar things have been done already in the 1920’s as wine bottles.

K: Copied from there?

TS: I wouldn’t say copied but if humans have tried to think about something for 200 years sometimes you get same ideas. Often when you have had an idea home and go to the hot shop to do it then after two days you find out that someone has made an exact same thing, never know what will happen.

K: What’s your favourite tool?

TS: Jacks and flaring shears. The less tools... the less tools. You can do quite a lot with a piece of newspaper and flaring shears. I like the piece to finds its form, to force it as little as possible.

K: It’s said that Finnish design is often minimalistic, abstract and pure etc. Can that also be related to the minimal use of technical tricks?

TS: I’m not an expert an old design but when it comes to glass at least the less squiggle the easier it is to make. But on the other hand you can use squiggles to hide all the mould marks and little faults in pressed glass, like In Kastehelmi (by Olva Tolkk). Then again pure and straight shape requires a lot from the glass as a material, that it has to be flawless and good. But the simplicity in techniques might relate to the Finnish fonctionalism, based on the fact that less work is faster to do.

K: Do you have a feeling that Finland is losing something, now that changes are coming?

TS: If the factory goes away a certain type of hot shop disappears, what can’t be easily replaced. Although being an industrial factory it is closer to studio glass or free blown glass processes... And all the colours and resources it has... A lot goes away from Nuutajärvi but I don’t know does it disappear from Finland. I would like to believe that we can preserve the glass knowledge that’s here. Maybe it starts going towards the art glass when people want to know what is done where. Maybe all this turmoil can bring more... there are possibilities hidden in the crisis. If you can make positive changes, you can’t afford to sink into the darkness...

K: I wonder what will happen to the Nuutajärvi logo? Who owns it?

TS: I think Fiskars owns it but I guess we have a license to use it. We will see... To older ones from the village have said that they have news articles from 1993 stating that the factory will be shut down for good... That’s 20 years ago they decided to shut it down. You
HW: I’ve been working for Iittala 6 years, of which 5 years here in Nuutajärvi. I started in Humppila glass factory and have now lived 4 years in Nuutajärvi.

A: Have you been to the glass school here in Nuutajärvi?

HW: No, I’ve done the Kuopio Design Academy, glass and ceramics design.

K: So you’ve done the design academy?

HW: Yes.

K: Do you have a design aspect in your work... or do you miss that you could design or how did you end up (from design) making glass?

HW: I wanted to learn to make (glass) myself. That was important to me. And especially when I was in school I was really motivated and excited, but I have noticed that I also really like to be able to do other people’s products. Somehow it felt that you didn’t have that many ideas you had when you were young... which is sad. Hopefully someday I get to design something, for example for this company (Iittala).

A: This is your future wish... Where do you see yourself in 5 years?

HW: I can’t say that... It would be great if that would happen...

K: But you will still continue with glass as far as you have the energy?

HW: So far as I have energy, yes. When it ends... you never know.

A: How did you end up with glass? You had also ceramics (during your studies)...

HW: I was already interested in glass in primary school but I didn’t even understand how to get to this kind of profession. But then slowly, also accidentally, I ended up (making glass)...

K: What fascinates you the most in glass? What inspires you the most?

HW: The feeling when you mould it. I can’t express more accurately. The feeling of doing. Sometimes it’s also really frustrating, but...

K: Is there a tool or a process in the work that’s the most pleasant?

HW: I can’t say that. Usually when you practice making new things and you get the feeling of success that’s the best thing.

A: You mean...

HW: Sort of when you practice and learn and then you succeed...

A: Does it happen a lot? Do you get often new things to try out?

HW: Sometimes yes. It depends on the work. Some might get more...

A: How important are Nuutajärvi and glass?

HW: Well, there’s a really long history. I can’t say anything...

K: Do you learn from other people here who work with glass? Do you talk about glass?

HW: Yes, of course. There are a lot of people who are connected by glass.

K: You can share experience and knowledge.

HW: Yes.

K: How do you see it - if at one point there’s no education on glass in Finland - where do new people learn blowing

from. It used to apprenticeships in the factories.

HW: Yes, it started in a very young age... It’s quite a broad question. I see that apprenticeships (modern) are good. There are studio glassmakers and the factory and they have a lot to give, to teach.

K: That’s what others are also saying... Last question. What is best in Nuutajärvi?

HW: Best?

K: It can be anything.

HW: I don’t know... best... well it is beautiful here. Forest is a good thing.

A: Okay, thank you.

HW: This wasn’t so painful.
MS: I've been living here for 13 years. I came from Japan in 2000, end of January. Then I went to study in the school and then came to work here. I've worked here for 10 years.
A: Why did you come to Finland all the way from Japan?
MS: First I was interested in Finnish music and then it changed to art field, design and glass.
A: Did you know already as kid you want to do glass?
MS: No.
A: So it really was first music and then glass?
MS: Yeah... I didn’t think music would become my profession.
A: Where did you get your glass education?
MS: At Wetterhoff's.
K: Ah, the one before Tavastia. And then you stayed here?
MS: Yes.
A: How is it to live in Nuutajärvi?
MS: During school I was almost the whole time from morning till evening at school. It was fun to get to blow the whole day.
K: What is the best thing here?
MS: The hot shop.
A: You have lived here now for 13 years. Where do you see yourself in 10 years? Are you involved in glass?
MS: If there are no layoffs, I will be working with glass in Finland.
A: You don’t want to go back to Japan?
MS: At the moment I’m nothing thinking about that.
K: What inspires you in glass, why is it important for you?
MS: It is fun to do it. Fun and difficult at the same time. Everyday there are different challenges for me.
A: Are you still learning every day something new?
MS: Yes, everyday something. If you do everyday the same way... you accidentally do something wrong and then you have to do adjustments... and you accidentally succeed. Sometimes it becomes better and then you shift towards that.
A: Are other workers helping out, do you talk about things?
MS: Yes, you learn a lot from them.
K: By observing others and asking?
MS: Yes.
K: Do you think it’s important that glass stays in Nuutajärvi?
MS: Yes. It is better if the factory stays. Nuutajärvi starts from the factory.
A: Do you have a favourite tool or thing?
MS: A tool... well, jacks are the most important.
A: What’s the best place in Nuutajärvi?
MS: The hot shop.
K: The hot shop?
A: I noticed that it’s good that we have a distance now from Nuutajärvi. What if in the end of our thesis we realize that it might not deserve to continue.

K: You mean the glass industry?
A: The whole day I’ve already had this feeling... okay, now we are writing and we have this philosophy but why are we trying to save something that might not be needed in the future... It is also unclear... I don’t know... and yes, I was thinking should we write about something else?

K: Maybe it’s true, that we are recording something that’s dying. Like Renee (from Design Academy) said: “We are recording or writing history for the future.”

But hey, you mean that we should start from scratch?

A: No, but there might be... or.
We have been doing for half a year research about a glass village and then coming with the conclusion that maybe the only option is to let it end... if there are not enough possibilities to keep it alive. Of course we should capture the techniques and there is this important link between Finland and glass. And again I think it should be saved and we should work on it. Sometimes I feel: now when we are so deep into it - that it already feels like a lost case. The foundations are not right...

K: Was it Sara who said it... that it will go up and down. There will be times when there is more demand on glass, on handmade glass, on Finnish glass. Then if there is not skills and knowledge to do it anymore what then?

A: That’s the whole problem; a lot of schools are quitting somewhere to get their crafts departments, and suddenly arts and craft become booming again.

In the crisis art sells the best.

K: Because you want to invest in something that keeps value, or even better: gains value.

But it is really true... is this some turning point in our process? I see this question “why” being quite serious: i see this blank page in the thesis saying WHY? The text is fat and big. We should say what we have done and why... then there has to be this click.

A: We need a better focus point.

I think we need to let some things go... one of them is that we can’t save Nuutajärvi, we won’t be able to and we should not even try. We should focus more on the material and the techniques. We are too much focusing on the tacit knowledge.

K: We can talk about values, emotional values, in design objects in general. Why would you acquire an object? Because it has certain emotional value and keeps you holding on to it for a longer time. And of course if it is quality and hand made you hope it will last longer than mass produced glasses from for example IKEA.

A: It’s funny that we are working with Nuutajärvi, the factory will stop, maybe even the school.

K: Don’t you think that there is also this sense of that something is dying and you try to grab on it and still squeeze out all the juice it has, and then it’s gone...

A: I think there is a big future for glass. Like this company you showed... what was the name... Boos? They make a lot of innovative glass pieces.

K: Not technically super interesting but new innovations.

A: It’s important how we do this workshop. A big part of the thesis will be based on that. And actually I would like to meet somebody from Fiskars.

K: Really, why?

A: I’m just curious what their plans are.

I was thinking we should maybe go back to the raw materials. It’s important to understand where the material is coming from and how glass is made. Like what Atelier NL (design duo from Eindhoven, the Netherlands) is doing: they are starting the process from the beginning but we start from the end.

K: I don’t think that we have chosen some main methods. But that’s maybe more related to the documentation of recording something. But we still have a lot of possibilities.

A: But what if we see the documentation, like Renee said as a history for the future. So that’s then done. And if we now next to that start thinking more from the point of view of glass.

K: About what, the movie or the thesis?

A: The thesis. To do more research in the shape of a certain technique. This can of course be linked to Finnish identity.

K: You mean hmm...

A: I mean that we should go back to where we started from: the glass halls.

K: We went there with this idea of doing a project which would end up with different pieces of glass that would show the different hand prints of the blowers. You mean that?

A: This is still something we could do.

K: But also you said about this Nuutajärvi DNA... in some of the interviews you could see that they were talking about that if something (the knowledge) is lost and if Nuutajärvi is gone... And if you have to start from the scratch it will not be the same. And during the years Nuutajärvi has been active as an own brand, and also when being part of iittala, they have produced certain kind of glass. Hand made unique glass and pressed glass. And with certain colours, like Kaisa has mentioned. So there is a certain design DNA in Nuutajärvi. So what we could do is to try to get hands on the DNA what they have there. What would maybe bring its status.

A: If they would create there own style.

K: Yes, exactly! If they would have their own style. That “this is Nuutajärvi glass” and “this is what we do.” It can be a really radical change from the past.

But what is Nuutajärvi glass then? There are now different makers... maybe they are already doing glass based on the DNA... they might not think about it but maybe they are doing these decorative glass pieces and using certain colours which have been part of the Nuutajärvi history. So maybe this is already happening... sort of unconsciously...

A: Where does the raw material nowadays come from?

K: From Belgium, because the sand there has less iron. In Finland the sand produces too green glass.

A: What happens if you would mix sand with hot glass?

K: I think nothing much would happen.

A: You know what I think? We should stay close to nature. That’s one of the things you see in the past.

K: There is so much nature.

A: That’s what makes Nuutajärvi different from all the other places. Living with nature, animal with glassblowers. If you look at the old pieces you see that the person understood and lived with nature. This is what made Finnish glass design so famous. And nowadays they still live in the same circumstances; they still have an idyllic life... but they start making these really crazy things non-related to the surroundings... to the history... to the nature.

K: Yeah but is it then the school? Because many of the blowers (in Nuutajärvi) are from the school. Is it then the responsibility of the school to give a taste of what the identity of Nuutajärvi is? What the direction of Nuutajärvi is.

K: It should have a philosophy!

Go to the nature to get inspired. And then they should have a certain standard how the glass should be done. I also think that this is how our workshop could give a hint of how we would do it.

A: I also think that there should be clear techniques which they can use (and be good at).

K: And which they could experiment with.

A: They should be able to say after their studies, “I graduated from Nuutajärvi and I am really good in this and this and this etc.” “I graduated from a Swedish glass village and I’m good in this... etc.”

K: And if you teach glass blowers. If you don’t want them to go again somewhere to get an education, should you not already during the 2,5 years give a stronger conceptual – in the style of Nuutajärvi – approach.

And now we talk about Nuutajärvi glass and who were the ones that made Nuutajärvi glass famous...? The designers together with the skilled blowers.

A: Why are there no design teachers in the school?

K: But then again we are talking about the glassblowers doing it (design) themselves. It feels that Nuutajärvi needs an own art director who sort of sells what’s produced in Nuutajärvi.

This Norwegian glass village, Hadeland, they have an art director.

A: We have to show that this workshop of us is going to work, and that the outcome is different than they are doing now. Otherwise nobody will take us seriously.

K: But how does this sound this Norwegian glass village. They have this art director and she approves the designs that are going to be produced. Either it comes from the glassblowers or other workers, or from herself or then they might collaborate with a designer and the idea comes from them but it always goes trough this one person. So there is a cohesive style and identity.
A SHORT INTERVIEW VIA EMAIL /
MAUD GJERULDSEN BUGGE, ART DIRECTOR AT HADELAND GLASSWORKS (NORWAY)

Anna & Kristas: How big part of the production in Hadeland does hand-blown or handmade glass make?

Maud Gjeruldsen Bugge: All the production at Hadeland is handmade or mouth blown.

AK: How are Hadeland's designs created? Is there collaboration between designers / artists and the glassblowers? Can you give us an example?

MGB: We have a design team of seven designers that work for both Hadeland glassworks and Porsgrund porcelain factory. We have a close cooperation with the glassblowers and the workers at Porsgrund porcelain factory.

AK: What is the future scenario for handmade glass in Norway? Where is the development going?

MGB: We hope to keep as much of the production as possible at Hadeland and in Norway.
PART III
THE EXPLORATION
PREPARATIONS
A SESSION WITH LESTER ARIAS

On Sunday the 19th of January we met Lester Arias, a modern dancer from Venezuela, in the Amsterdam School of Arts. At the 8th floor of the old brick building, inside a grey theatre studio, we held an intensive one-day workshop led by Arias. He is studying dance choreography but has also a strong understanding of the design process; he has performed for and worked with several designers in various projects.

We asked Lester to think with us about new methods for designing glass where the focus is more on the "body" and the "movements" of the blower. It might sound weird that we go to a dancer to get inspiration for glass making but actually glassblowing and dancing are not that far away from each other; yes, the outcome is different and the environment is different but both are based on movements and controlling the body. Both the dancer and the blower rely on their tacit knowledge that controls their body. We might even say that each of these actions benefit from a well-planned choreography (or design) that has a meaning and aims to speak to the audience. Following this line of thought, another resemblance can be drawn between dance and glassblowing: dancers and blowers can both be seen as the actors in a scenario where the choreographer or the designer is the director.

Like implied before in the text, our urge to explore the possibilities of the methods used in the theatre world comes from the months spent at the Theatre Academy in Helsinki. We think that any approach that pushes you to ask "what am I doing" is a step closer to something new and unpredictable. Of course you can use methods from your own field, methods that are approved within the discourse. But we argue that in order to make new discoveries and to push your field forward you should step outside of your field, to explore new worlds. The old Finnish phrase "matkailu avartaa" (travelling broadens your mind) truly has a point there.

Another, quite logical reason for approaching a dancer for advice is the fact that we designers do not have the sufficient tools or knowledge on performance art or body movements. With the help of Lester we were able to put on different glasses and step into the unknown world of dance and choreography. We had the idea of taking methods from the performance world to the hot shop, but first we needed to understand those methods and Lester needed to understand the glass making process. Without this sharing of knowledge our collaboration with Lester could not be successful.

PART I / MOVEMENT

We edited a fifteen minutes clip from our flies captured at Nuutajärvi and showed it to Lester in the beginning of the workshop. All the three of us were watching the clip analysing the things happening on it. Straight from the start it was evident that Lester was focused on different aspects than us; he was observing the actions through the eyes of a dancer or a choreographer. Things Lester mentioned were such as temperature changes in the glass, the posture the blower has, the danger of the material and the forced distance between the blower and the extremely hot glass piece. Also the teamwork between the blower and the assisting person was in his eyes a fascinating aspect.

LA: Something I can see already now (from the clip) is that you are working with a material that is potentially dangerous (...) When you want to create a really fine jar – which is really thin – you need to be over the material shaping it, but when you are careless about the shape it actually means that the material could be two meters (away) in distance. So I can protect myself and manipulate it at the same time.

This clearly shows that a dancer sees glassmaking from a different perspective than for example a designer who is usually focusing on the object: the shape, material, colour and function of it. Lester, however, is focusing on the act of doing, like it would be a dance. He is not interested in the functional properties of glass, the glassmaking techniques or the tools of the blower; the dialogue between the material and the maker and the actions used for manipulating the material are more important for him as a choreographer. For us this is extremely interesting and educative because we ourselves are not able to look at glass (or any other material) without thinking all the time about the end product, the shape and function of it. With the help of Lester we were able to zoom out of the superficial layer of glassmaking and thus entering a different, deeper level.
DISCUSSING ABOUT THE CLIP
AND WRITING DOWN GLASSBLOWER’S
MAIN MOVEMENTS
PART II / GLASS

This part of the workshop was about pushing us a bit out of our comfort zone. Almost like in meditation we were asked by Lester to stand with our eyes closed in the middle of the studio and taking glass into our hands gradually letting it take over our bodies — in the end we had become glass.

The following is only a few minutes part of the 17 minutes transformative dance we performed following Lester’s instructions:

LA: Be in space. Take a place in space. Close your eyes. Try to be centric so that you don’t hit any object around you. Let’s start moving a bit, thinking about the delicate handwork of the glassmakers. Just start with your fingers, with your hands. Try to really isolate your body parts ... we can start little by little by moving the fingers and wrists. Just fingers and wrists and see which are the possibilities of those fingers. How much they can contract, expand, separate, get closer to each other. It’s a never stopping investigation. You are your own boss. You are the one who created the rules. In the moment you get busy with certain energy — with certain shape. Something you like. You try to understand what is that your body is talking about. What is that what you are discovering. And now try to really present this hand movement you have recorded with your camera. How the handwork is moving, this very limited movement of the hand. And while doing, and without stopping, just be aware where is the weight of your body. Is it more in the front of your foot? Without judging, without trying to influence it. Just bringing awareness into the body without stopping the hand’s work. Where is my waist placed. How is my neck doing. Am I aligned with my body ... So now you become aware that by these hand movements you are manipulating a vibrant, shiny hot piece of glass. Then imagine how actually this movement is shaping this piece of glass and imagine what kind of shape this piece is taking ... you start manipulating the shape with your movements. You decided do you want to go more to the right, more to left. How many times you want to roll. How many times you want to blow...
PART III / SCORE

For most of the workshop we worked on using scores.

During the mid 20th century choreographers and dancers started to work on choreography with a score – like some members of the famous FLUXUS group. Instead of saying ‘go to the floor and now do this movement’ they would write down on a piece of paper for example:

Lemon
1 Buy a large basket of lemons
2 Place the lemons
3 Throw the lemons
::FLUXUS workbook, Ken Friedman

LA: What if you for example say three rotations to the right, two to the left, blow in, two rotations to the right, blow in, blow in, blow in for three seconds, blow in, cutting, two rotation to the left.

For practicing score writing we wrote twice a score for each other using only simple actions. The focus was not on glassblowing but in the space we were occupying; how you perceive the space and the objects lying there using the script as a guide, as a to-do list of actions. This was a pure practice and something really far from what we have been doing before. After performing the actions we analysed the outcomes and reflected them on our expectations. Next page two examples are shown.

Written by Kristos, performed by Anna:
1. Stand up
2. Find a door with your eyes
3. Walk to the door
4. Touch the handle with your tongue
5. Sit down
6. Roll to the nearest ball
7. Hug the ball
8. Push the ball somewhere
9. Walk to the ball
10. Kiss the ball

Written by Anna, performed by Kristos
1. Play the piano. Stop
2. Open the door and look outside
3. Try to stand on your hands 10 times
4. Look into the mirror
5. Walk around
6. Keep on walking
7. Start running
8. Stop
9. Look at the roof
10. Search for an interesting shape

Some parts of the scores became a focus point in our discussion, like action 3. Try to stand on your hands 10 times. The loud sound of falling down, because of failing to stand on your hands, made the action feel dangerous. But it was not about succeeding or failing, it was about how the way the action was performed: in which gesture, at which intervals, in which tempo, where in the space. These things were all uncontrollable because of the openness of the score. This freedom makes a score’s outcome unpredictable and will always differ when more persons are performing the same score.

TIME
After performing we called this experience “a movement in space using our bodies as a tool and manipulating time” because one thing you can manipulate by using scores is time. Time is a property that is also overruling the glassmaking process mainly because of the liquid aspect of the material; if we went to manipulate the process of glassmaking we have to manipulate time. We repeated the score focusing on manipulation of objects, space and time (see next page).
Written by Kristos performed by Anna
1. Choose a pen
2. Write a word on paper
3. Put a shoe on your hand
4. "Walk" with the shoe 5 meters
5. Go back to the word and rip it off the paper
6. Throw the piece of paper with the word on it, out of the room
7. Run to a wall
8. Take 5 steps backwards
9. Pick up the paper you threw out
10. Perform the word sitting on a chair.

Written by Anna performed by Kristos
1. Go and stand in the corner
2. Observe and walk 20 steps into space
3. Go and open the curtains, touch the mirror
4. Walk away from the mirror but keep looking at yourself
5. Make a sound
6. Take an object and create music
7. Walk outside into the hallway
8. Search for something
9. Bring it inside
10. Show it to us

What would be the outcome when using different scores? It can be an experimental way to play a game with the actual conditions and for the blowers and designers a way to step out of their routine. There is no concept and no force, only the maker’s interpretation; the outcome can be a total surprise. This means that if we would write a score for glassblowing the outcome will differ with every blower. Every blower will read the score in his or her own way, and chooses his or her own location and time. For us this is again very interesting if we want to search for the handprint of different blowers instead of a precisely copied perfect technique. How can we write one score that will look different every time when it is blown? Can we challenge the mass produced, perfectly designed pieces with pieces created by using scores?
SCORE

Like in dancing glassblowing involves human movement that is specified in terms of space, shape, time and energy (or force). In glassblowing the designing of an object is traditionally done through a drawing made by a designer, artist or the maker himself. In dancing the designing a dance, i.e. the choreography, is usually done by a choreographer or a director.

In choreography two fundamental methods are used for designing a dance piece: improvisation and planned choreography, in improvisation the choreographer creates a score and provides the dancers with it. A score gives only general guidelines for movement and form thus giving more space for personal interpretation by the performer – in other words the performer's own style and personality become more visible.

According to choreographer Anna Halprin scores can be also used to bring creative resources to the surface. These resources she talks about are unconscious and hidden: feelings, attitudes and blocks. In this way a score becomes a tool for discovering hidden things – in the same way as tacit knowing is a “tool” for discovering hidden problems.

Halprin states that scores are used to generate creativity. As true as this is there is always the question of the quality of the outcome: the choreographer might not be satisfied with the emerged dance piece. But still scores can be a very efficient way of bringing new ideas and those hidden emotions, personalities, out.

BREAKING GLASS
FIVE DAYS IN NUUTAJARVI

Can we manipulate the design (outcome) without having a set design, but still follow a designed structure? Can a method based on chance operations trigger the glassblower to try and create new actions. These were the question we were asking ourselves before jumping into the actual doing.

We want to emphasize that for us the process is more important than the actual outcome. The fear with glass is that when it’s not properly designed it will look like kitsch. But sometimes ugly outcomes have a far more interesting process behind them. This is the first step to use the process but not in the end create a design.

Time or timing is an essential part of glassblowing and to only make the parison takes some minutes. Then follows the shaping and re-heating and maybe again shaping and re-heating. And of course the more emphasis is put on the technical correctness and accuracy the more time the whole process will take. We wanted the tasks to be faster and tried to encourage the students to fail which would hopefully lead to bold and extreme results. But being more careless of the end result doesn’t necessarily mean more risk-taking but might actually lead to...
After experiencing the advantages of using a score under Lester’s guidance we created our own set of actions for creating a score for the glassblowing students. Glass is a material that remembers all the actions it has gone through, which makes a “glass score” even more interesting because you can actually observe the created piece and see the actions it has recorded.

To make it for the students a bit more easy we decided to put all the actions (written on small papers) in a glass jar from which they then picked randomly ten actions. The order the actions were picked in was also the order of the score and it was to be performed by another person than the one picking the actions. The one creating the score (director) was reading out the actions step by step to the one performing (performer) it – having thus the power.

Some actions, like “gather glass”, we wrote on several papers just to increase the probability of having glass in the performances – if a score did not include the step “gather glass” then there was no glass piece coming out of it. We also added non-glass-related actions such as “go outside”, “sing a small song” or “jump 360°”. All this was done to break the normal glassmaking process and through that bring out something unpredictable. When you look at glass being shaped into a perfect, well-designed object you see a clear process. When you see a glassblower following a random choreography (design) there is another quality coming to the surface: time. In this task the director had the control over time being able to decide when to move over to the next action. But also the performer had the freedom to choose in which manner to perform the action. However, when the focus is taken out of the making process and the end product the material itself starts controlling the process; the actions of the maker become merely failed attempts to handle the material.

On the contrary to our assumption, that it might be hard for the students to step out of their routines, it seemed to be that they were actually enjoying the task. But so did we; seeing the students perform and fail to control the glass piece taught us more about the material than we would have expected. The decision of letting the students to pick the actions randomly, following the method of chance operations, brought about unexpected and amusing scores and outcomes.

LIST OF ACTIONS FOR CREATING A SCORE

- Rotate the pipe
- Take a deep breath
- Go outside
- The assistant makes the rest
- Get a button
- Blow a parison
- Swing the pipe
- Block the glass
- Start making a swan
- Gather glass 2 times
- Swap the bench
- Shout “ready!”
- Turn 180° counter clockwise
- Cut with the handle shears
- Gather glass
- Heat the glass in the glory hole
- Whistle and blow into the pipe
- Pinch 3 times
- Sing a small song
- Blow with eyes closed
- Take 5 steps back and forwards
- Shape with the jacks
- Use the paddle
- Brake glass
- Ask the assistant to blow a parison
- Take a break and tell your name
- Jump 360°
- Gather glass without rotating the pipe
- Don’t rotate the pipe
- Blow 4 times
1. Hymy 10 kertaa
2. Vahnda penkit
3. Mene kahvit syömään
4. Kerää lasia
5. Sakskaa te
6. Puhalla 4
7. Muotoile
8. Kerää lasia
9. Riko lasia
10. Heiluta
1. Take a deep breath
2. The assistant makes the rest
3. Block the glass
4. Gather glass 2 times
5. Shout "Ready!"
6. Start making a swan
7. Use the paddle
8. Pinch 3 times
9. Block the glass
10. Block the glass
1. Jump 10 times
2. Swap the bench
3. Take a deep breath
4. Gather glass
5. Take 5 steps back and forwards
6. Blow 4 times
7. Shape with the jacks
8. Gather glass
9. Brake glass
10. Swing the pipe
1. Jump 360°
2. Gather glass 2 times
3. Go outside
4. Gather glass
5. Jump 360°
6. Whistle and blow into the pipe
7. Gather glass
8. Rotate the pipe
9. Gather glass 2 times
10. Blow 4 times
1. Gather glass
2. Blow 4 times
3. Shape with the jacks
4. Start making a swan
5. Ask the assistant to bring a button
6. The assistant makes the rest
7. Jump 360°
8. Gather glass without rotating the pipe
9. Sing a small song
10. Get a button
SCORE FOR THE GLASSBLOWER
PART TWO

After the first afternoon of working on the score we might say that it was a great success – in terms of getting the students activated and having some strange glass pieces coming out of it. But we wanted to take a step forward and get something appealing instead of strange out by using the score. Is there a way to design a successful glass piece when reducing the designer’s control and giving space for the maker's interpretation and chance? What is a successful glass piece?

This time we asked the students to write the scores for each other themselves. Now the score had to include “gathering glass” and possibly “making a cutting mark”; we had learned from the previous task that if the blower is not making a cutting mark it is almost impossible to save the glass piece. We did not want to intervene too much but now we tried to guide them more than in the first part. By stimulating the students to make the next step more interesting. We for example asked them to think about the blower they were writing the score to – his /her weaknesses and strengths. We also advised the one writing the score to take in consideration time and repetition; by controlling these factors you have more power over the glass – for example instead of writing only “pinch” they could write “pinch for one minute”. Still this would leave space for the performer’s own interpretation.

Before we all started writing new scores we had a group meeting where we discussed about the outcomes of the first scores, for example in one score the student had to go outside (to wintry cold) for 10 seconds with a piece of hot glass at the end the blowing iron. After that she had to gather glass which resulted in thousands of small cracks or bubbles in the glass because of the temperature shock. These small failures is those we (designers) are seeking for and this would not have necessarily happened in an “orthodox” process.

We tried out this task ourselves as well: Anna being the choreographer and Kristos the performer.
1. GATHER GLASS
2. BLOCK THE GLASS AND BLOW
3. GATHER GLASS
4. PINCH FOR 1 MINUTE
5. BLOW
6. GATHER GLASS
7. MAKE A CUTTING MARK
8. BLOW
9. SHAPE WITH NEWSPAPER
10. SHOUT “READY!”
1. GATHER GLASS
2. SHAPE (WITHOUT TOOLS)
3. GATHER GLASS
4. STOP
5. TALK
6. SHAPE (WITHOUT TOOLS)
7. GATHER GLASS
8. MAKE A CUTTING MARK
9. FALL ASLEEP
10. WAKE UP
FORCED VS. FREE
PART ONE

During the winter we have been working on an organic plate design for a tableware company. This whole process has taken extremely much energy; the company has asked for new drawings, to change the dimensions, again new drawings and always as soon as possible. Then there was a long break during which we did not hear anything from them until suddenly we had to again redo our drawings and again as soon as possible. The new drawings had to be accurate with every angle, radius and dimension marked - just because the drawings are thousands of kilometers away to a distant factory. We felt that we were forcing a material (porcelain) that has so many opportunities when you would give it a bit more space to find its own shape. It is also paradoxical to have an organic, natural shape to be only manufactured by a machine.

We had two groups: one was playing with a rectangular mould and the other one with a round one. Quite quickly we noticed that the blowers had problems with trying something new so we decided to step in; we were rotating and playing with the moulds asking the blowers to blow on a certain spot. This made it evident that our skills were a good match with the blowers’ skills. We were thinking out loud and “out of the mould” while the blowers were gathering glass and prepared to react on our actions.

These experiments were the first steps to create a forced but free shape. Each piece created had a mark of the same moulds still being totally unique and different from the other.

When there is no place for mistakes or the material is not allowed to take its form why would you make anything by hand? Why are we always seeking for perfection even though it would be made by human hands? Can we design an object that is not forced to shape but can be implemented to serial production? Is there a way to bring the uniqueness to the same, easily manufactured design. In the third task we played with the students and gave them two normal wooden moulds. But instead of blowing into the mould, like normally you would do, we asked the students to explore with them and to use them in different ways.
BLOWING “OUTSIDE THE BOX”
FORCED VS. FREE

PART TWO

After a whole day playing with the moulds we left back to Helsinki thinking about the next step. Again we learned a lot of the behaviour of the material and how the blowers react on the tasks, but like with the score we had to push also this one further.

In our school’s wood workshop we created two identical wooden moulds. They have a triangular inner shape which you can blow into but we made the moulds open on both ends making it possible for the glass to find its way out of the mould. With using these moulds we wanted to create an object that has a controlled part and an uncontrolled one showing the nature of glass. The triangular shape means the blower cannot rotate the glass when blowing into the mould thus having less control on the material.

The next day we had few wooden broomsticks with us and played around with them to see what these untraditional, “semi-moulds” would bring about. The limitations given by these sticks is less than with a normal mould; the multiple ways of using and combining simple sticks create more variety and freedom for the blower and the designer alike.

With these two moulds we went back to Nuutajarvi, asked the students to gather around them and started drawing our ideas on the spot – no forced technical drawing but just a big piece of paper and a red marker. We already discovered before that when approaching the students with a problem rather than with a fixed design they start solving it with you. So instead of saying “make this, please” we asked them “Is this possible?” and “how could we get this done?” It was about engaging the problem together and sharing ideas.

We noticed that the task was a bit harder than the free blowing on the moulds, like we did with the previous part, and only some of the students were able to get close to what we had drawn on the paper. One of the teachers had to even cheat a bit in order to get a satisfying result. But the point was not to create a piece based on our drawings and wishes; by keeping the brief more open and giving it as a problem to be solved rather than a design-to-be-executed we witnessed many different solutions and efforts coming through collective brainstorming.

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GLASS ALIAS

One thing occupying our minds all the time was “can we have a fixed design but still keeping it open for interpretations?”, “can we use a clear drawing without any details?”

The next concept we came up with is similar to the Finnish board game Alias, where the players try to explain a word (without using that exact word) to each other. So, what would happen if the players are glassblowers and the words are drawings? We drew four pictures of simple objects and gave one to each student and split them to pairs.

The student with the picture had to guide the other one to make that object without saying what the object is. How to explain to make a banana without using any drawings or the word “banana”? Are the blowers able to translate their skills and (tact) knowledge into verbal instructions that the other one can understand?

This game was extremely fruitful for the students; it had elements of peer-to-peer learning, as noted by our tutor Toni Kauppila, where students interact with each other to gain knowledge. This is also a characteristic of teaching in the field of crafts where learning happens through experience. During this task we felt more as facilitators and outside observers bringing in an educational game, which can be used by the teachers, Sara and Marija, in the future. But of course we also get closer to a collaborative method where we can have an input even though not we are not actively participating in the task.
BLIND DRAWING

PART ONE

How is an abstract drawing been translated into a physical object? After the score, forced vs. free and glass alias we started to manipulate our drawings. We wanted to combine the openness of the score and the unpredictability of chance operations in a drawing that is done, on top of all, collaboratively.

The task starts by folding a paper into three sections. One person draws a shape (any shape) on the top section without showing it to the others and turns the middle section of the paper on top of it. Next one comes and draws a shape on the middle section and folds the bottom part of the paper on top of it. Finally the third person draws a shape on the bottom section. Then the paper is unfolded and the whole drawing is shown. After that a team of blowers creates a glass piece based on the drawing.

We drew the first drawing as an example and the students did three more. There were three teams and each of them could try to do all of the four drawings. It was really interesting to observe how different teams chose different approaches and techniques for making the same “design”. Maybe fewer drawings would have been better because it took longer than expected to finish a piece ending up in having only one version of two of the drawings. Luckily at least one version was created of each drawing.

These random, abstract drawings incorporate only certain visual guidelines and leaves space for interpretation. There are no settings for colours, dimensions or techniques to be used. If the same drawing is given to different glassmakers the outcomes will most likely differ in each occasion. Take for example a circle inside another circle: it can be interpreted as a hole, an air bubble or a smaller ball attached to a bigger one (p. 233).

In general, the exercise seemed to be really fun to do and at least we two enjoyed it a lot. Also the results are interesting and show the differences between the teams or blowers. One notion we can make from the outcomes is that the pieces are really similar in size, unless the blowers’ process was interrupted; because of lack of time we asked one student shaping the parison, to make the object smaller. He then skipped the part of gathering more glass and created the piece, together with his teammate, straight from the parison resulting in a miniature version of its bigger sister (p. 237).
FRESHLY MADE "BLIND DRAWINGS"
This became the last task of the workshop. Based on things learned from the previous part we decided to make two final drawings ourselves; wanting to make the outcomes more designed and purposeful we actually gave ourselves a brief for making the drawings.

Again, we started by folding a big paper into three sections. But now, instead of drawing whatever pops into mind, we decided to draw a utilitarian glass object: first drawing was to become a ceiling lamp and the second one a carafe. Of course, still, we draw our own sections without seeing what the other had done.

The finished drawings indeed have more “designy” feeling but also show our taste that comes intuitively and is personal for both of us. Whereas Kristos likes clean and straight lines Anna likes more clumsy shapes; and when combined the outcome is unpredictable, designed concept but still resonating our individual tastes.

With this kind of design process we want to question the use of a drawing as a accurate blueprint for an object. Of course in industrial manufacturing detailed technical drawings are a necessity. But when working in close collaboration with a craftsman and with such a flexible material as glass the drawing can be only a rough sketch, like in Oiva Toikka’s case. The details are solved together and both the maker and the designer can put their ideas and skills on the table.

This task was more challenging than expected, perhaps because we were asking for a more concrete object with some demands on the quality of the glass. This can be seen in the three versions of the lamp that the blowers did. Two of them failed because of overheating the piece in the glory hole or a cold punty, in other words the first one got a wavy surface and the other one fell on the floor because of not attaching to the punty (p. 243).

The blowers did not want to save these pieces but for us there is embedded value in them; the first one, the wavy one, shows that the blower was feeling sick and therefore could not focus. The one ending up on the floor tells about the lack of communication between the two blowers working together. Making mistakes is a learning process and glass is really good in recording those mistakes; by saving the pieces you save the mistakes for you and other ones to learn from.

The carafe was even more difficult to execute and we did not get any pieces out from it. Again, it is only a lesson for us on what works and what does not work. Or, it can also be that the skills of the blowers did not match our demands; every blower has different strengths (like Heikki mentions in his interview) what makes it sometimes more challenging to find the matching blower and design.
PART IV
THE REFLECTION
A LOOK INTO THE MIRROR
WHAT WAS LEARNED?

If three words were to be chosen to describe the process of this thesis they would be exploration, collaboration and intuition – the same themes that are covered in the first part of the book and have travelled throughout the whole nine-month journey to this exact point.

MAIN THEMES
Let us start with the first word: exploration. Exploration is about discovering new places, people or ideas. Our journey has taken us from a black box of a theatre school to a hot shop of a glass village. We have entered words totally foreign to us and had to leave our prejudices on the door step. Learning a new language is hardly ever easy but once you start understanding a few words here and there suddenly that strange world starts to make sense. But being in a world as a stranger not speaking the language is sometimes a positive thing; you look at things from a different perspective than the locals and can give new thoughts and ideas to them. It can be as eye opening for them as it is for you, if you are ready to keep the eyes open.

In his aforementioned book *Tacit Dimension* (1966) Michael Polanyi talks about a society of explorers where man “is placed in the midst of potential discoveries, which offer him the possibility of numberless problems.” This kind of man he calls Man the explorer (Lato, Homo inventore) – yet another man to the list of men listed in the introduction of this book. But contrary to the other men (Maker, Creator and Consumer) Man the Explorer is not producing or consuming anything; he is on a journey. The explorer is trying to discover, relying on his intuition, something that is still hidden. A designer could fit to the pants of the Maker, or Creator but we like to think we fit better to the Explorer’s pants.

In the beginning of this project we did not know what lies before us, it was hidden and we just had to go with our intuition. But we felt that there was potential and fruitful things to be discovered. The discoveries we made have indeed, like Polanyi notes, offered us numberless problems. However, those problems are more like opportunities, challenges and ideas. The five days spent making glass with the students and the whole nine-months process has given us more than we had before the start: more ideas, more connections, more knowledge. Part of that knowledge is tacit which means it is for us impossible to record that and explain it in words. It will show up in the later projects we are going to do.

Speaking of us two, collaboration is the third word to be covered here. This thesis has been the start of a long term collaboration between the authors but also with other persons, from other fields. We believe that designers should engage more with others and share their knowledge instead of designing new designs which will be replaced with other designs. This thesis is an example of the importance of collaboration: it would not be existing without it.

WHAT DID WE GET?
In the end you can of course ask and question the outcome. There is no new lamp, table or vase, no new design, no object. But for us the outcome has been way more important than a materialistic thing. The outcome does not always lie in the object itself but in the discoveries you make, the connections you make and the knowledge you gain.

We learned what the possibilities and restrictions with glass are and especially how blowers approach different tasks and how they interpret shapes and images. We were able to record their handprint in many of the objects; although they fell making errors we felt making discoveries. Nevertheless, in the end both parties have learned something.

We are asked to return on yearly basis to the glass school in Nuutajarvi to run similar workshops as we did for this project. We are asked to collaborate with the Finnish glass Museum for their coming exhibition. We are asked to create a short film for Gumbostrand Museum. Hopefully, when the whole movie is finished, we will be part of a film festival showing a great piece of Finnish culture to a wider public.

OUR ROLE?
Maybe our skill as a designer is not to create a perfect and simple design for the maker to execute but to create a platform, an open concept, that gives space for interpretation and challenges the maker by pushing him / her out of the box. Juhani Palasmaa talks beautifully, in the book *The Thinking Hand* (2003), about his awakening on this matter:

“I used to think that the architect’s duty was to design structures and details that are as easy to execute as possible. (...) Work that is too simple and repetitious kills ambition, self-esteem, pride and finally, the craft itself.”

We believe that collaboration is the key in keeping a craft alive. Like shown in this book craft relies on tacit knowledge, which is a fragile type of knowledge that can not be easily recovered once lost. Because tacit knowledge lives in an individual and transfers through human interactions there has to be collaboration between the makers. This will help the craft of glassmaking stay alive. But if you want to create something new, to create new tacit knowledge then – we believe – there has to be collaboration between the maker and the non-maker, let us say the explorer.

I USED TO THINK THAT THE ARCHITECT’S DUTY WAS TO DESIGN STRUCTURES AND DETAILS THAT ARE AS EASY TO EXECUTE AS POSSIBLE. (...) WORK THAT IS TOO SIMPLE AND REPETITIVE KILLS AMBITION, SELF-ESTEEM, PRIDE AND FINALLY, THE CRAFT ITSELF.

Juhani Pallasmaa
ONE CHANGE YOU WOULD DO IN NUUTAJÄRVI?

ANSWERS COLLECTED FROM OUT INTERVIEWS AND QUESTIONNAIRES

1. Bring in more diversity
2. Fix all the buildings
3. Change the school’s approach
4. Make it an international glass centre
5. Let the factory stay
6. Swap places with Fiskars :}
EPILOGUE
THE STORY CONTINUES...

6.3.2014
The factory of Nuutajärvi celebrated last year its 220-year birthday. Today the furnaces of the factory were permanently shut down and the humming has stopped. We were there to see it and record it with our camera. Although the factory is empty and quiet the smaller furnaces in Nuutajärvi are still glowing bright.
THE GLASS TREE, MADE BY THE STUDENTS, IS WITNESSING THE FINAL DAY OF THE FACTORY...
KIITOS
THANK YOU / DANK U WEL / EFCHARISTO

We would like to thank those who have been willing to share their knowledge and collaborated with us during this thesis. This is not an Oscar speech but this project would not be what it is without the help of the following people:

Professor Timo Saari / Applied art and Design, Aalto ARTS
Professor Toni Kaupila / Spatial and Furniture Design, Oslo National Academy of the Arts
Eliina Salakari, lecturer and Ph.D. candidate / Department of Design, Aalto ARTS
Kaisa Koivisto, chief curator / Finnish Glass Museum

Professor Tapio Yli-Viikari / Glass and Ceramic, Aalto ARTS
Elinna Järvinen, studio master / glass workshop, Aalto ARTS
Niina-Anneli Kaarnamo, substitute studio master / glass workshop, Aalto ARTS

Sara Huikkonen, lecturer / Tavastia, Nuutajärvi
Marika Kinnunen, lecturer / Tavastia, Nuutajärvi
All the students from Tavastia at Nuutajärvi
Tero Silver & Jenni Sorsa, glassblowers / Amorphia, Lasikomppania
Heikki Vinikainen, glass designer / Nuutajärvi
Marko Enroth, manager / Iittala factory, Nuutajärvi
Mitsuru Sato, glassblower / Iittala factory, Nuutajärvi
Helena Welling, glassblower / Iittala factory, Nuutajärvi
Matti Räsänen, glassblower / Nuutajärvi

Lester Arias, dancer and choreographer-to-be / The Netherlands
Maud Gjeruldsen Bugge, art director / Hadeland Glasverk, Norway
Rutger Graas, carpenter / The Netherlands

And the staff from the department of Applied Art and Design

Thank you so much!
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Keuringsdienst van Waarde, Mondgeblazen glas

THINGS THAT INSPIRED US
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Nederlands Dans Theater / The Hague, The Netherlands

Searching for Sugar Man / Malik Bendjelloul

Theatre Academy / Helsinki