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A conversation on collaborative embodied engagement in making art and architecture: Going beyond the divide between ‘lower’ and ‘higher’ cognition

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RAAAF [Rietveld Architecture-Art-Affordances] is an interdisciplinary studio that operates at the crossroads of visual art, experimental architecture and philosophy. RAAAF makes location- and context-specific artworks, an approach that derives from the respective backgrounds of the founding partners: Prix de Rome laureate Ronald Rietveld and Socrates Professor in Philosophy Erik Rietveld.

What follows is a conversation between Erik Rietveld, Ronald Rietveld and Janno Martens, a historian of art and architecture who previously worked as an intern at the studio and as research assistant of Erik Rietveld. Starting from their own fascinations and an independent attitude, RAAAF's interventions explore possible new worlds. Through a unique working method based on multidisciplinary research with scientists and craftspeople, these interventions connect locally available social, cultural, material and natural qualities of the living environment to the past, present and future. Taking five of RAAAF's large-scale, site-specific interventions as examples, Ronald, Erik and Janno discuss how these artworks emerge from collaborative embodied engagement across multiple timescales.

Janno Martens: In a recent publication on 'ecology thinking in architecture', we related the work of RAAAF to the topic of the book through the ecological-psychological notion of affordances (Rietveld and Martens 2020). However, when talking about ecologies of collaborative skill and embodied engagement with artworks, I think it is important to understand how Erik situates these ideas within the Skilled Intentionality Framework, or SIF. Erik, could you expand on that?

Erik Rietveld: Of course. The Skilled Intentionality Framework was developed in order to connect ecological, phenomenological and neurobiological levels of analysis (Bruineberg and Rietveld 2014; Kiverstein and Rietveld 2018; Rietveld et al. 2018). It can be summarized by the following three interrelated theses:

- 1 There is no divide between 'higher' and 'lower' cognition. Both can be understood in terms of skilled activities of engaging with situations in the world.
- 2 Skilled activities are temporally extended processes in which agents coordinate to multiple relevant affordances simultaneously.
- 3 The affordances the environment offers are relative to the abilities available in a form of life.

We have defined affordances as relations between *aspects of the sociomaterial environment in flux* and *abilities available in a form of life* (Rietveld and Kiverstein 2014; Van Dijk and Rietveld 2017).

The form of life of a kind of animal consists of patterns of behaviour, i.e. relatively stable and regular ways of doing things (Wittgenstein 1953). In the case of humans, these regular patterns are manifest in the normative behaviours and customs of our communities. What is common to human beings is not just the biology we share but also our being embedded in sociocultural practices: our sharing steady ways of living with others. A skilled individual has developed their abilities within the dynamics of the landscape of affordances of a form of life.

The individual's intrinsic dynamics can be understood as multiple bodily states of action readiness that are attuned to the *relevant* affordances in the situation (Bruineberg et al. 2016). States of action readiness are reciprocally coupled to the landscape of affordances, in the sense that these states of action readiness self-organize and shape the selective openness to the landscape of affordances for the individual to accommodate the skilled individual's concerns, i.e. to allow them to maintain or obtain sufficient grip on the situation. In this way, some affordances in the landscape show up as more and some as less relevant to the individual's unfolding activities. Imagine attending a social event, say the opening of an exhibition: you are not just ready to see the works of art but also to interact with people. You will be attracted to the affordance of engaging with an approaching acquaintance. If you had entered there hungry, though, you would first be attracted to the affordance of grabbing some of the snacks on offer. These intrinsic dynamics of the individual thus allow for a selective openness to the *relevant* affordances (an extended hand, a snack, an artwork).

JM: And how does this relate to collaborative action?

ER: In acting skilfully one is attuned to the sociomaterial situation as a whole and for that reason there is not a clear separation between affordances offered by the material environment (a snack, an artwork) and possibilities for interaction with other people (an acquaintance). This is also a nice illustration of there being no divide between affordances for so-called 'lower' cognition (eating) and 'higher cognition' (social interaction) within SIF. In relation to skilled collaboration, i.e. coordinated social interactions, I must be *ready* for the actions of another person, and they for mine. Crucially, the nesting regularities of the shared sociomaterial environment – the familiar social context of an exhibition, a library or a diving class for example – contribute to this interpersonal attunement of

states of action readiness (Rietveld and Kiverstein 2014; Van Dijk and Rietveld 2021). Some of our first work on how affordances might work at the level of expert action was concerned with how collaboration worked at RAAAF. An ethnographer observed how this skilled collaboration was ongoing even as members of the team were not physically present: architects would anticipate the preferences and responses of an absent collaborator when making decisions about details or the overall look and feel of the artwork they were creating jointly (Rietveld and Brouwers 2016). This gives an indication of how complex this kind of affordance-responsiveness is.

Because we do not differentiate between ‘higher’ and ‘lower’ cognition within SIF, no activity is excluded from being understood in terms of a skilled responsiveness to relevant affordances. The articulated goal of making an artwork can thus be understood as engagement with a large-scale affordance, and its realization approached as being sensitive and responsive to this affordance. Participant observation of how the architects at RAAAF realized an artwork over a longer period of time led us to develop a process-based account of affordances (Van Dijk and Rietveld 2021). *We understand collaborators as participants in such large-scale processes.* We found that by inviting participation, affordances can weave together to form yet larger-scale unfolding affordances:

The process [of making an artwork] invites participants to intertwine with it and contribute their skills. They are invited to act and thus coordinate materials and transform them, so that these organized materials afford new activity to continue the process, the making of the installation. In short, the architects and other skilled individuals, familiar with architectural practices, can be invited to contribute their skills. By doing so, the larger scale process sets up the conditions for its own continuation – it forms the terms in which materials invite activity, from writing a sentence for a wall panel to seeing the opportunity to go to a store to buy carpet [to be used for constructing the artwork]. As the large-scale affordance (the new installation as a whole) thus slowly nears enactment, the range of invitations for the architects grows smaller and may become very specialized and only inviting to a very few responsive participants. By that time, anticipating the large-scale project has long made way for

the affordance of looking back on it. For others, participation has however just started, as the installation invites supported standing to the people working at the art fund, invites to be shown to visitors and [...] to be maintained and cared for in order to keep unfolding.

(Van Dijk and Rietveld 2021, 366–7)

One of the important theoretical take-aways from this study was that in the process of making, it is through an embodied engagement with the collaborative process that the work gets more determined: the complex and *large-scale affordance of creating an artwork* is constantly unfolding, to which skilled individuals respond dynamically to get more grip on the changing demands of a particular situation within this multiscaled process. Our observations suggested that finding continuity across articulated goals, written plans, images and models over time is achieved in activity. To be more precise, this continuity is achieved by coordinating activity in such a way that multiple affordances across timescales are jointly determined further. This ties into the second point I mentioned when summarizing our framework: SIF understands skilled activities as temporally extended processes, in which agents coordinate to multiple relevant affordances simultaneously.

Ronald Rietveld: Indeed, much of our work as a team consists of figuring out how to meet the demands of a particular challenge within the process of realizing an artwork. And keep in mind that our team dynamically expands as the need arises. In fact, the collaborations with various craftspeople from different fields who are not directly associated to the studio are crucial for the type of work we intend to make. Many artists like to be in control of the material aspects of a work by doing it all by themselves, which by definition limits the scope and scale of what they can make. Because we assume from the outset that we will need to collaborate with highly skilled craftspeople, we can be much freer and more ambitious in our visions for an artwork. We often do not find out what the limits and possibilities are until we collaborate with specialists who are prepared to experiment within their own craft; they too are pushed to explore what is possible. And in turn we come up with new ideas by learning about and observing how these master craftspeople engage with their materials, which is not just

about seeing them work, but also includes the smells and the haptic qualities of the materials and techniques in their workshop; it is really a visceral and embodied experience of having all your senses stimulated whilst collaborating. Only through such a collaborative working method can you achieve work that truly realizes the seemingly impossible.

To give the example of *Bunker 599*: in order to cut through a Second World War-era bunker, we had to find people who had the commitment and skill to saw through several metres of reinforced concrete, which took over a month and required an enormous diamond saw. We saw what the process was and got to explore what was possible. This allowed us to push the limits even further on a follow-up project called *Deltawerk II*, where we realized a 250-metres-long land art project, for which massive amounts of concrete were cut, and then rearranged (Figure 2). We needed the experience of having worked with them earlier to get a sense of what was actually possible.

For the installation *Still Life* (Figure 3), which consists of four enormous brass plates measuring 5.3 by 3.3 metres, we were really dependent on the sole metallurgic company that was able to cast brass on such scales. It is a company that has also made the giant church bells for the Notre Dame cathedral for example, but even they had never cast brass on such a scale. The actual material properties of these giant sheets, with their rough sheen, erratic surfaces, random air pockets and other material characteristics, are really the result of an exploratory phase where we join forces with these highly skilled craftspeople who are often the only ones on a national level who can pull it off.

ER: Yes, in that sense our work can be seen as the result of a collaborative ecology that reaches far beyond the confines of the studio, which is actually rather small. As we observed in our ethnographic study of realizing an artwork within the studio (Van Dijk and Rietveld 2021), it is through our expertise with involving specialists from the beginning that we are able to anticipate the direction that the process is taking. The more such participants are invited to contribute their skills to the process, the more direction it can take, and the more its participants will be able to attune to the direction of its large-scale unfolding (cf. Noë 2012, 25 ff.).



FIGURE 2 RAAAF | Atelier de Lyon – Deltawerk II (2018). Photo by Jan Kempnaers. © RAAAF.

Deltawerk II brings into question the Dutch effort to realize indestructible sea defences in times of climate change and rising sea levels. At the same time, it is an experiment in the active creation of ruins and a plea for a radically different approach to cultural heritage. By digging out a colossal wave basin that served as test site for the Dutch Delta Works between 1977 and 2015, this monument of the Dutch battle against the sea is suddenly inundated. By sawing through the concrete flume and re-arranging its parts, a new rhythm of slumping slabs reveals the true size of this massive laboratory. It allows visitors to walk over the water and into the flume, confronting them with a perspective on the void that now inhabits the space between the heavy slabs.



FIGURE 3 RAAAF – *Still Life* (2019). Photo by Jan Kempenaers. © RAAAF.

During the Cold War, millions of bullets were made for NATO soldiers worldwide in the former bullet factory The Hem. At the time, the factory was full of trays with brass bullet casings. The artwork Still Life brings the abandoned war factory's history into question and creates a link between the present, past and future of this historically burdened heritage. The source material of the bullet production has been melted and cast into four heavy brass plates. The large plates move in between the columns in an unpredictable rhythm; together they open and close one's perspective on the immense space. Their movement forces the visitor to relate to the work over and over again. The brass plates move slowly away but inevitably return.

Not all of these collaborations are with 'hands-on' crafts such as casting metal or cutting concrete. Sometimes the opposite is the case, for example with our proposal for a giant block of sand (Figure 4). For this project we are collaborating with materials scientists at the Technical University of Delft who are researching ways to use microbes in order to turn sand into sandstone. This is a highly experimental technology, and they have yet to pull their method out of the infamous 'valley of death': the phase of product development where many ideas fail to be implemented because it

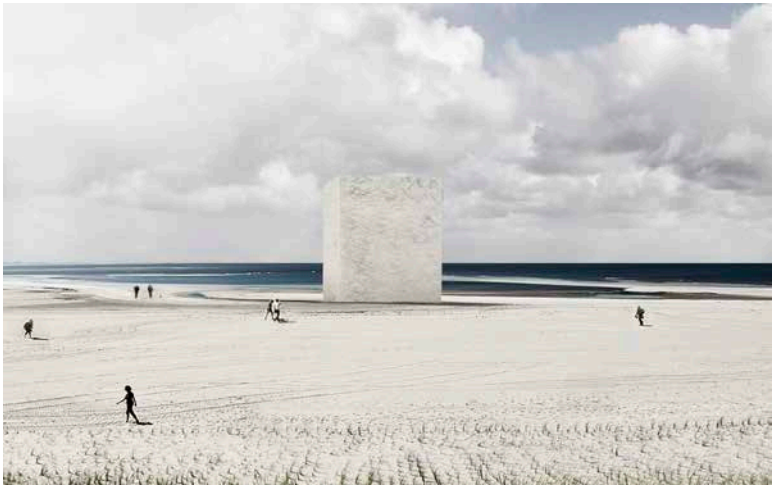


FIGURE 4 RAAAF | *Atelier de Lyon – Sandblock* (2019). © RAAAF.

is too difficult or costly to scale up to commercial applications. By using their experimental technique on our experimental artwork, we are engaged in a mutually beneficial collaboration between their expertise and our vision. Actually, on an ecological level, it might even be considered as a collaboration between them, us and the microbial organisms that turn the sand into sandstone. This goes to show how collaborative engagement is situated in a rich landscape of affordances and is highly dependent on the variety of abilities that are inherent to different forms of life, as I mentioned in summarizing SIF. In this case, the abilities we depend on for a work come from the forms of life of us as artists, the materials specialists as experimental scientists and the abilities of microbial organisms when they are presented with the right environmental conditions.

JM: Besides skilled craftspeople and material scientists, there is a third category of specialists you often collaborate with: cultural historians. They obviously bring something to the table as far as research goes (they helped identify different types of bunkers for the *Bunker 599* project for example), but perhaps their role in the actual materialization of the artwork is far more limited.

Speaking about (cultural) history: what I have found to be interesting since first encountering your work is the way it relates to historical precedents. Within architecture, many others have

held similar ideas with regard to creating affordances – whether they be for creating places to sit or are geared towards larger social phenomena. For example, to me, the historical similarities between a RAAAF project such as *Trusted Strangers | New Amsterdam Park (N.A.P.)* (Rietveld et al. 2019) and the ideas of Jane Jacobs (1961) or Jaap Bakema (cf. Van den Heuvel 2020, 19) initially seemed very obvious. Especially the idea of being able to observe others is a very recognizable tenet that has long been championed as a way of realizing urban social cohesion. However, after becoming more acquainted with SIF, I did notice some differences in how these principles were thought to work back then and how they are conceptualized by Erik and his colleagues. Whereas Jacobs or Bakema regarded the idea of ‘eyes on the street’ as enabling some sort of basic connection with public life, in SIF it becomes more about *learning* to be exposed to one another, of a *process* of becoming part of community that involves a certain skill: you refer to the notion of ‘bi-cultural competence’ (cf. Voestermans and Verheggen 2013) as something that can be learned, i.e. as a skill. I feel this is a more dynamic approach to social cohesion than the ideas from the 1960s, which generally related to the community as a whole but to a certain extent neglected individual performance. Erik, could you say a bit more about how individual performance relates to collaborative performance?

ER: As for the references behind *Trusted Strangers* (Figure 5): this project was mainly informed by a study of social cohesion in a multicultural district of Amsterdam (Nio et al. 2008). The notion of ‘trusted strangers’, of being exposed to one another, was partly based on this. But other elements were grounded in ecological-enactive insights. One of the key aspects of the park is that all spaces are to be freely accessible to the public, which ensures that visitors can roam freely. This allows people to over time explore more and more aspects of the park.

With regard to individual versus collective performance, it is important to note that each individual grows up in a multitude of practices and contributes to the maintenance of a collectively shaped landscape of affordances through having their development sculpted by other members of these practices. However, each growing and learning individual takes their own unique and particular path to do so – a path that is shaped by and shapes the skills, sensitivities and current concerns of that individual. Thus, in

any concrete situation the field of relevant affordances forms at the point (or rather the line) where both the individual's path and the landscape intermingle and together develop further. As they make their way together, neither remains unchanged (cf. Ingold 2011, 2018). For example, the invention of diving equipment enriches the landscape of affordances, which can in turn enable the formation of new sociocultural practices such as deep-sea diving, and further improvements of the tools that support it. There is an aspect of dynamic change which concerns both the individual and the collective as well as the landscape of affordances.



FIGURE 5 RAAAF|Atelier de Lyon – Trusted Strangers | New Amsterdam Park (N.A.P.). © RAAAF.

Taking into account the urgent need for a good public domain along with our own research into and views on how to create such spaces, RAAAF and Atelier de Lyon have proposed a temporary floating park called Trusted Strangers | New Amsterdam Park (N.A.P.). Along the northern bank of the River IJ, a grid of twenty-four large barges will shelter a hidden water world: the basis of a new floating park. By accommodating both subcultural niches as well as ‘public’ activities with a broad appeal, the park becomes a condensed city floating on the water with an abundance of social affordances. And because these affordances are made to be attractive for people with diverse sociocultural backgrounds, they are able to generate new patterns of behaviour and invite surprising spontaneous interactions. The notion of ‘trusted strangers’ – the importance of people becoming ‘familiar strangers’ to their neighbours in order to bolster social cohesion (Blokland-Potters 2005) – served as the project’s premise: observing and being observed is made possible by the material environment (portholes, cut-throughs and meandering overhead pathways all contribute to this) and is essential to the culture of this park.

JM: While *Trusted Strangers* is very collective in nature and affords distinct and particular activities – it is a park after all – many other interventions by the studio are much more ambivalent as to what kind of (re)actions they could or should evoke. For much recent work by RAAAF, which relies strongly on poetic and abstract qualities, the collaborative aspect is not quite as clearly present. In those cases, the performance of the artwork seems more related to the personal embodied experience rather than to collaborative engagement. How do you conceive of this relation between personal experience and collaborative performance of a work – embodied or otherwise?

RR: In each project, we make sure both that the visual image is striking and that the work allows for a certain immersive embodied experience of the work; a ‘total experience’. From the very outset we consider what kinds of engagement are afforded by the spatial and material aspects of a work, and without the engagement of the visitor a work would definitely not be ‘complete’. Usually it is at the level of the ‘total experience’ that people initially relate and react to the work: to the scale, the materiality, the experience of being immersed in something. You could see this as a collaboration between the work and the visitor. However, as you know we always make context-specific work and that means that we also often convey a certain cultural history, or want to bring something to the attention, or to change particular practices such as conservation policy (Rietveld and Rietveld 2017). It is in the latter sense that we characterize our interventions as ‘strategic’. We have recently begun to conceptualize these different aspects as the ‘inner horizon’ and the ‘outer horizon’ of a work (cf. Merleau-Ponty [1945] 2002; Rietveld and Rietveld 2020). When we had to communicate our project to others, this would usually be done through photos of a work in its context, and we would then follow up by telling its ‘backstory’; with relating the work to the cultural historical and societal references that informed it. But it was very difficult for people to relate this ‘outer horizon’ to the ‘inner horizon’ of the work, which is often constituted by embodied experience related to the materiality of the work. So now we’ve begun to make very detailed composites of hundreds of high-resolution close-up photos of our work in order to convey their materiality and experiential qualities, to translate them to an exhibition setting.

ER: The division between ‘inner’ and ‘outer’ horizon is an analytic distinction, because in the end the idea of a total experience is that it allows for both of these horizons to be present at the same time when one actually visits the work.

JM: With some of the work that is strongly related to cultural history, which *Bunker 599* for example certainly is, I guess this experience would indeed amount to a type of collaborative engagement because it conveys history in a very tangible and embodied manner. It is very rare to be engaged with history in a non-linguistic manner, but with you being specialized in embodied experience and action, it makes sense that this would be the way that the work of RAAAF allows for that. I am inclined to say that collaborative performance is in fact also a part of the more autonomous works, though not so much in the relation between different simultaneous visitors but rather in the relation between the (socio)material and historical environment and people’s experience, of what it lays bare, and of how it allows for a visitor to experience a particular place in a new way. Having said that, I do wonder what the role of language is within SIF, and how it relates to (creative) collaboration.

ER: As far as language is concerned, it is important to keep in mind that although my academic work (and by extension the work of RAAAF) has tended to focus on embodied experience and skilled action, language itself is certainly not something that is outside of its scope. Quite the opposite, crucially: because we do not distinguish between ‘higher’ and ‘lower’ cognition, language can also be understood as skilled engagement with affordances and a type of collaborative embodied action (Kiverstein and Rietveld 2020). The materials from which speech is made – expressive bodily activities – take form through the regular ways of acting of the members of the linguistic community. The expressive possibilities available to speakers of a language – what Merleau-Ponty (1945/2002) called ‘spoken speech’ – are sustained by the regular, habitual patterns of talking. These established ways of speaking lay out what makes sense, and what does not, in the language-speaking community to which the individual belongs. If a person is to speak and make themselves understood, it will only be by acting in ways that fit with the patterns for doing things already mapped out in the standing practices (cf. Wittgenstein 1953). The regular pattern of doing things is essential because it is relative to this agreement in

how to take part in the practice that evaluations can then be made as to whether a use of a word in an utterance is appropriate, or inappropriate, correct or incorrect (Rietveld 2008; Van den Herik and Rietveld, 2021).

JM: This is fascinating to me, because I recently studied a case of two major names in art history which showed that skills in relating to a foreign linguistic community can make or break a career (Martens 2020). One was able to be sensitive to the established ways of speaking, as you call it, whilst the other was not. Now, I might be on a bit of a tangent here, but this notion makes me think of a prerequisite for collaboration at RAAAF that we have not touched upon yet: the notion of someone ‘fitting in’ with the team, which in my experience of working there has always been very important. It seems to resonate with what Erik just said about established ways of speaking: in order to understand the work being made, and understand each other for that matter, one needs to have a feeling and sensitivity for what makes sense within the ‘community’ of the studio. While this does not immediately relate to any type of specific skill, it nevertheless seemed important for successful collaboration. Ronald, what are your thoughts on this?

RR: Not only is it important, having somebody fit in with the team is a matter of pure necessity. We are a small team, all working at the same table, so naturally it is important that everybody gets along. It is true that this is not a matter of skill or affiliation with just the work alone: those are prerequisites that go without saying. But whether somebody fits in with the team or not concerns qualities that have nothing to do with that; in fact, I would argue that in this regard it is more important what kind of Spotify playlist somebody listens to than what work they have in their portfolio. People have to be able to relate to the motivation of why we make the type of work we do and share some of the deeper fascinations that drive these – if you do not love concrete you don’t stand a chance! At this level, completely different factors are important for successful collaboration, such as a shared sense of humour or music taste.

JM: I think those remarks constitute a very suiting conclusion to a conversation related to collaborative performance: music and humour are certainly important within any cognitive ecology as far as I am concerned! Thank you both for this insightful conversation.¹

Note

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