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## USING THE FUTURES CONE IN DOCTORAL SUPERVISION

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### Abstract English

This article is a reflection piece on the use of the futures cone and an expanded futures cone (which draws on queer theory) as a tool for dialogue and planning between the supervisor and the doctoral student. I do so by situating the use of this tool in relation to three supervision typologies: the product-orientated, process-orientated and doctoral student-orientated approaches. I claim that it is an underused and highly versatile tool for doctoral supervision.

*Keywords:* doctoral supervision, futures cone, queer theory, interdisciplinary research, Ph.D

### Abstract Swedish

I denna artikel reflekterar jag över användandet av futures cone och expanded futures cone (hämtade ur queer-teori) som verktyg för dialog och planering mellan handledare och doktorand. Detta görs genom att relatera verktyget till tre typer av handledning: ett produktorienterat, ett processorienterat och ett doktorandorienterat förhållningssätt. Jag hävdar att det är ett underanvänt och mångsidigt verktyg för doktorandhandledning.

*Nyckelord:* doktorandhandledning, futures cone, queerteori, interdisciplinär forskning, Ph.D

## **Introduction**

In this paper I explore how futures cones can be a useful tool in doctoral supervision. I do so by engaging with the literature as well as drawing on my own experience of using futures cones for other purposes. More specifically, I situate the use of the futures cones in relation to three supervision typologies identified by Lindén (2020, pp. 13-14). While other typologies exist, Lindén's (2020) is the focus due to its prominence in the field, especially in the Swedish doctoral supervision context. Lindén (2020) posited that three interrelated supervision typologies can be identified. These are supervision which is product-orientated (the production of research results being the focus), process-orientated (how the doctoral student changes throughout their studies) or doctoral student-orientated (focusing on the individual qualities of the student) (Lindén, 2020).

When engaging with these typologies, I focus primarily on the third, the doctoral student-orientated process. This is because I see the supervision process as principally grounded in a deep interpersonal relationship between the supervisor(s) and doctoral student, being focused on the development of the doctoral student based on their individual qualities. However, I also recognise that the nature of the supervisor-doctoral student relationship is complex and fluid. Doctoral studies are not a linear progression culminating in the acceptance of a Ph.D. thesis on the last day of the doctoral student's contract. They are messy, subject to change and often highly reliant on factors beyond the control of the doctoral student or the supervisor. At every point of the doctoral studies multiple futures are open to the doctoral student. Futures cones provide a tool which allows the supervisor(s) and the doctoral students to conceive of various futures that may arise, discuss them, plan how to work towards those which are desirable, and reflect upon the unknowns. For this reason, I think futures cones are an underutilised tool in doctoral supervision, one which could be used to the benefit of supervisors and doctoral students throughout the doctoral studies.

First, the paper will cover the basics of the futures cone, before exploring how this relates to Lindén's (2020) product and process-oriented supervision. Following this, an expanded futures cone, one which draws on queer theory, is introduced to reflect how this can be used to enhance a doctoral-student orientated approach. This is far from a comprehensive or systematic overview of the use of futures cones for doctoral supervision. Rather, it is a reflection piece, drawing on a few examples of where the futures cones could be useful as a tool in doctoral supervision. This is done with the hope to spark further debate on their use to complement other tools which are already in use.

## **The basics of the futures cone**

The futures cone is a tool which allows the participant(s) to explore various futures, arrange these futures, map out the likelihood that they will happen, as well as reflect upon their desirability. Futures cones<sup>1</sup> are a tool that was developed in the field of Future Studies. Within this field, the use of futures cones has been relatively common since the 1990s. Since then, there have been various adaptations to the

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<sup>1</sup> Sometimes referred to as the Cone of Plausibility(ies), Cone of Possibility(ies) or Cone of Uncertainty.

originally rather modest cone, adding to its complexity and scope.<sup>2</sup> However, for the purposes of this paper, I will initially draw on a relatively simple futures cone, shown in *Figure 1*.

It starts with the premise that, as of now, multiple futures exist before us, some being more likely to occur than others. The cone is very narrow at the start, at the point in time just after where it begins, because not many things can happen in the very immediate future. The further we move away from the present time, the more futures exist; hence the cone expands as more futures become possible. This is because the inputs, variables, unknowns and complexity increase over time; thus, the possible futures increase. These are limited as only so many futures can occur. It should be noted that this tool is not about predicting the future, as Gall et al. (2022, p. 2) explain: “Futures studies is not about finding the one likely future, but the multiple possible futures”. The futures cone can be used to:

- a) ...explain the overall idea behind multiple futures in an ever-expanding possibility space,
- b) ... help to contextualise specific components, characteristics, or events during workshops or training that aim to, for example, co-create different scenarios or map trends, or c) form a roadmap that showcases steps of the process [.] (Gall et al. 2022, p.2)

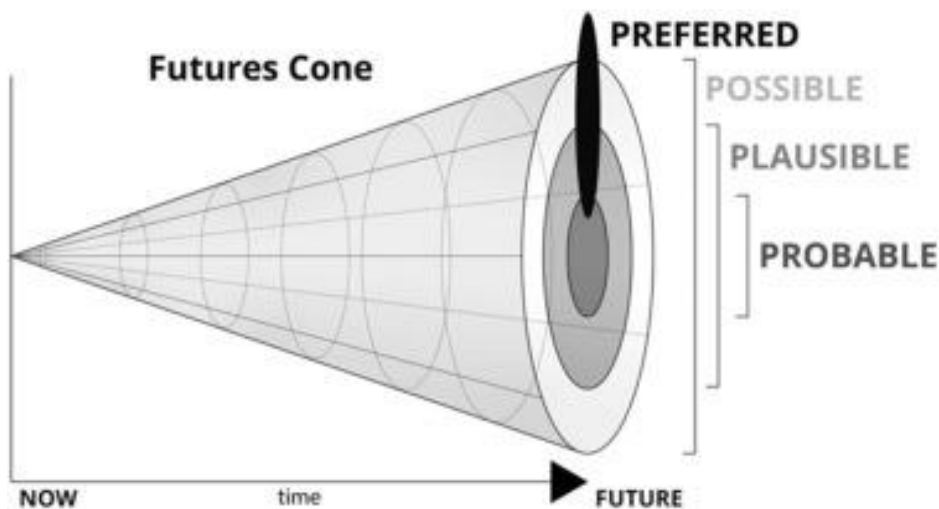


Figure 1. Basic futures cone (Gall et al. 2022)

Regarding doctoral student supervision, the cone is explored as a tool which can be deployed to achieve all three of the aims highlighted by Gall et al. (2022). The futures cone is a tool that can be used at any point during the doctoral studies and can be repeated as a doctoral student moves closer to completion of their studies.

This is not to say that other dialogue or planning tools are not required. Rather, I am claiming that it could be interesting to explore how this tool can be supplementary to other dialogue tools commonly

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<sup>2</sup> For a detailed overview of the key variations of futures cones that exist, as well as a timeline for their development, see Gall et al. (2022).

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used in the Swedish doctoral supervision, such as Karolinska Institutet's (2008) *Successful Supervisor, a Dialogue Facilitator*. They can also ground or shape discussions around the legal framework, such as the Learning Outcomes in the Swedish Qualifications Ordinance (Lindberg-Sand & Sonesson, 2020) and the Individual Study Plan.

## Opening dialogue about preferred futures: a product-oriented approach

The product-oriented approach of doctoral supervision sees the production of research results (understood here as the acceptance of the Ph.D. thesis) as the principal goal, with the development of the doctoral student seen as a consequence of the production of these results (Lindén, 2020). While Lindén (2020) notes that this is common where the supervisor “owns” the project, and thus a master-apprentice model of supervision occurs, one can also see this in cases where the doctoral student “owns” their project, but the production of the Ph.D. thesis is seen by the supervisor(s) or institution as paramount.

Figure 2 is a basic futures cone which I have updated. The doctoral student is the focus of the exercise, so they would be placed on the “now”, the point where the cone begins, point A. From this starting point one can map out what futures could occur during the development of their doctoral studies.

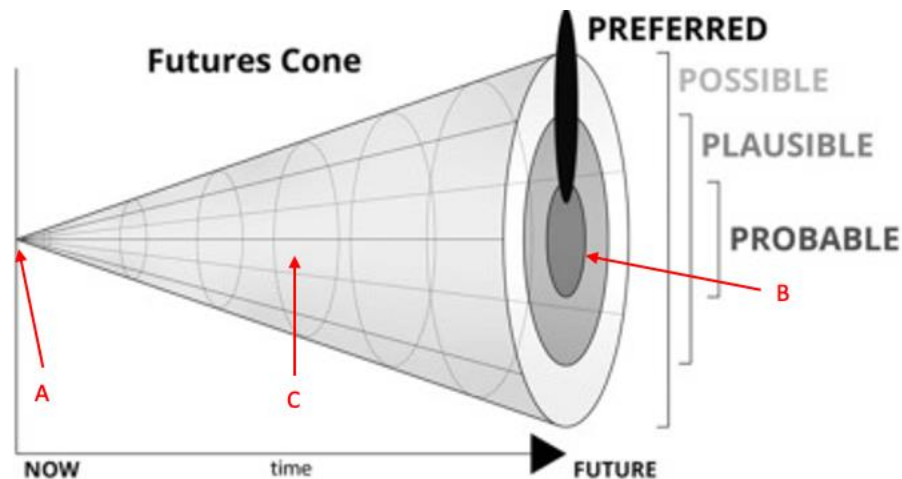


Figure 2. Basic futures cone (Gall et al., 2022), adapted by the author.

If completion and acceptance of the Ph.D. thesis is the main future goal (as the product-oriented approach would suggest), then this would be located where the timeline ends (where the cone is widest), point B. The closer B is to the centre of the cone, the more likely it is that the future where the doctoral student's Ph.D. thesis is accepted will occur. Between now and this future point the supervisor and doctoral student can map out various steps towards this goal. This may include receiving ethical approval, learning certain skills, having papers published (especially for compilation theses) or being granted access to a data set. While I refer to a “goal” here, this is not to claim that Ph.D. studies or the

supervision process can be simplified as having one goal with a clear pathway towards their realisation. Rather, the goal should be understood as a collection of sub-goals, which must all be covered at once.

The “preferred” option, which is highlighted in black, is the preferred futures that would arise for the doctoral student and/or supervisor. Here I think it is important that the doctoral student and supervisors agree on a shared preferred option so that the supervision and doctoral studies can be tailored towards this end. Some of the preferred futures are more likely to happen than others. The supervisor has a responsibility to guide and advise the doctoral student to avoid a situation where the preferred future they seek is very unlikely to be realised. Expectation management is part of this, not only in terms of what the doctoral student can likely achieve, but also in terms of what the doctoral student can expect from the supervisor, and vice versa, in working towards their preferred shared futures. This is important as a difference in expectations is one central area identified by Christie and Jurado (2013) that can lead to conflicts between supervisor and doctoral student.

The supervisor may assume, and hope, that the completion of the Ph.D. is probable, or at least plausible. The futures cone is useful in that if this is not the case, then the issue can be discussed and addressed. The steps taken can be adapted to ensure the product moves from the periphery of the cone (possible) towards the centre. For example, doctoral students may have unrealistic expectations about the nature of doctoral studies, such as the scope of their research. Or they may have to adapt due to a change in circumstances during their studies. Another pertinent example is COVID-19, which had significant impacts on the trajectory of many doctoral students who had already begun their doctoral studies when the pandemic began. By discussing and co-creating a range of possible futures using the basic futures cone, the supervisor and the doctoral student can not only shed light on unrealistic expectations, but also adapt their initial plans based on extenuating circumstances - doing so with multiple future options still on the table.

Uncertainty is a natural part of Ph.D. studies. Many of the most central goals are only realised near the very end of the process. Many others are subject to factors outside the control of the supervisor or doctoral student, such as the timeline and acceptance of publications, or ethical reviews. The futures cone can be used to mark out points of uncertainty to better allow for the management of these. Yet, one should be cautious in over-emphasising this approach as it could lead to an economic model of doing research, with progress being stifled by an overzealous fixation on outcomes.

The use of the futures cone also allows for open dialogue whereby the doctoral student can map out futures beyond submitting their Ph.D. thesis. For example, they may wish to take up a position at a specific institution in the academy, or for their Ph.D. research to form part of a longer-term research project. By placing the acceptance of the Ph.D. at point C, one can see it as a milestone on the way to other futures. As such, supervision can be tailored to work towards a preferred future that may go well beyond the end of the doctoral studies. In so doing, the product (the research findings), which may be the focus for the supervisor (and/or their institution) and the expectations of the doctoral student can work in tandem despite their different goals.

## **Discussing limitations and alternative futures: a process-oriented approach**

As Lindén (2020) states, the key aspect of the process-oriented approach to supervision is that there is a focus on how the progress of the doctoral studies changes the doctoral student, the supervisor(s), and the relationship between them. Supervision practices that fall within this typology include where the supervisor plays an active part in the research process, cultivating a relationship of trust and collaboration (Lindén, 2020). One means to do this is by shifting from the temporal to the overall perspectives on the process, which is important as “[t]he experiences gained by the doctoral student and the supervisor together as work progresses defines the framework for future work and helps both parties learn” (Lindén, 2020, p.15). During this process, different supervision strategies are needed at different times, strategies that can be discussed between the two parties using the futures cone.

The futures cone can be a particularly useful tool for dialogue and planning the process in cases where doctoral students are working on interdisciplinary research. This is a challenge, as Garderner et al. (2012, as cited in Brodin & Lindén, 2020, p.141) highlighted, as one must “strike a balance between breadth and depth in knowledge formation... [which] is a factor with which interdisciplinary doctoral students grapple expansively”. There can also be specific challenges to interdisciplinary research, as compared to that within one disciplinary framework. For example, it can be more time consuming as the doctoral student must navigate between two or more disciplines, learn to communicate across these and establish how to do so without neglecting the doxa of any discipline within which they are working (Brodin & Lindén, 2020). There may also be a need for supervisors and institutions to provide more, or specialised, resources to interdisciplinary doctoral students. The nuances of interdisciplinary research can be reflected upon by the supervisor and doctoral student in order to shape the doctoral studies to ensure that the preferred futures are as probable as they can be given these interdisciplinary challenges.

The futures cone is also useful here as it allows for collaborative reflection on, and systematisation of, the limitations and expectations, acting as a catalyst for dialogue on these issues between the supervisor and doctoral student. There exist constraints as to how broad the future cone can become over time, as well as how probable certain futures can be. Discussing these can be especially useful for the doctoral student, as the process-orientated approach may seem vague and without a clear focus. Reflecting on the limitations of the breadth of future possibilities, and in so doing narrowing these possible futures, can provide both parties with a clearer goal picture and build trust between them.

One limitation is that the doctoral research may have to be granted ethical approval and, in all cases, comply with the data collection/storage laws and university ethics policies. There may also be norms within the discipline(s), university, or unit or team that impact the probability of the realisation of certain futures for the doctoral student. Managing the above is related to the enculturation function of a supervisor, whereby the student is introduced to the discipline(s) within which they are to work (Lee, 2008, as cited in Lindén, 2020). Using the futures cone means that the process of enculturation is made explicit, and a space for dialogue between the supervisor and doctoral student allows for this to be reflected upon. Another limiting factor is the legal and policy framework around doctoral students’ studies in general. While Sonesson and Lindberg-Sand (2020, p. 42) note doctoral studies in Sweden “is a fairly elusive phenomenon from a legal perspective”, and policy varies depending on the subject and

institution, these frameworks still greatly impact doctoral students' futures. The duration of the Ph.D., the universities' obligation to provide funding throughout this period<sup>3</sup>, and which courses the doctoral student will be expected to take and when, etc. impact and limit the future and provide the doctoral student with a clearer vision and a better understanding of how their relationship with the supervisor will change over time, and why this will happen.

### **Queering futures: a doctoral student-oriented approach**

The doctoral student-orientated approach focuses more on the individual qualities of the doctoral student: how these can be developed, how to encourage greater independence, critical thinking, and resilience to setbacks (Lindén, 2020). This is not to say that this form of supervisor is passive, but that the supervisor takes on a listening and supportive role, developing a deeper interpersonal relationship with the doctoral student than is commonly found in the product or process approaches (Lindén, 2020).

While the basic futures cone is very useful for discussing aspects of the product and process of doctoral supervision, it has its limitations regarding a doctoral student-oriented approach. Most notably, it begins at point A, the now, and fails to recognise the past and present lived experiences of the doctoral student, and the impact this has on their futures. This is vitally important because, as Brodin & Lindén's (2020) research shows, ethnicity, socio-economic background, and gender have all been shown to impact the likelihood of an individual being in doctoral studies. There is also a rich and expanding body of research that details how gender, race, and class (as well as how these intersect) all have a significant impact on doctoral students' studies, as well as their perspectives on academic careers (see for example, Felder, et al. 2014; Wood, et al. 2016).

The basic futures cone can be slightly problematic in this regard, as Bisht (2020, p.217) states: "Often, the dominant worldviews are largely tacit, with practitioners as well as others participating in a futures exercise unaware of these biases". As such, there can be claimed to be a need to expand the futures cone as the supervisor and the doctoral student are not starting at the same point, and one's past and present must be considered if a listening and supportive supervisor style are to be most effective.

To address the complex lived experiences and intersectional identities of the doctoral student, along with shedding light on biases the supervisor may hold, one can turn to *Figure 3. An Expanded Futures Cone*, which draws on queer theory. As Fleener and Coble point out, this expanded cone is useful for drawing out the nuances of the doctoral student-oriented process:

Linking queer theory, adult learning needs and futuring strategies that support emergent and innovative explorations of plausible and desirable emergent futures highlights the importance of maintaining focus on connectedness, relationship and context as we

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<sup>3</sup> This may be different for industrial Ph.Ds.

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navigate and support futures engagements and extend futures activities ... [.] (2022, pp. 2-3)

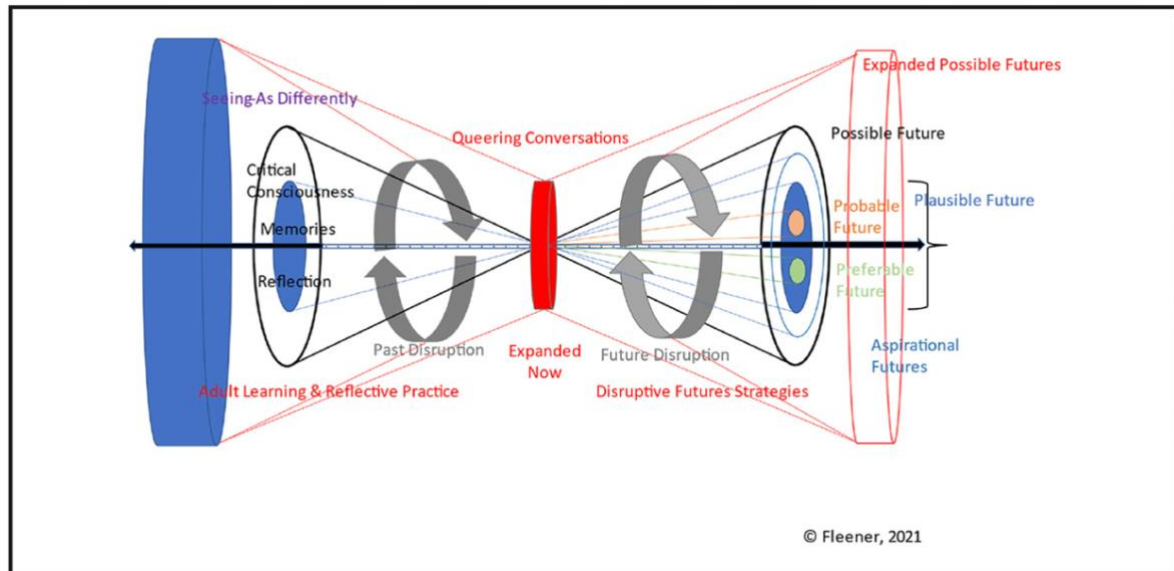


Figure 3. Expanded Futures Cone (Fleener, 2021 in Fleener & Coble, 2022)

‘Connectedness’, ‘relationship’ and ‘context’ are all highly related to the doctoral student-oriented process. By acknowledging and reflecting upon the past and present experiences of the doctoral student and their intersectional identities, as well as their own, the supervisor can better support the doctoral student based on the student’s individual qualities.<sup>4</sup> This is because rather than seeing the doctoral student as a static and easily defined point in time (a “now”), the expanded cone recognises them as living in an “expanded now”, and thus opens a space for the complexity of their lived experience to be incorporated into, thereby guiding doctoral supervision.

There is a concern, of course, that one may cross a line between professional and private in using this tool. Supervisors need to reflect on their power relations and how the expanded futures cone asks a lot of those who are participating. Therefore, this approach should be handled with great care and sensitivity, ensuring there is no coercion to participate, and with a clear explanation of how this links to the supervision process. If this can be achieved, the expanded futures cone in *Figure 3* opens a space to identify and discuss bias (for both parties), allows more innovative futures to emerge and could enhance

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<sup>4</sup> The value of queering futures goes well beyond my narrow reflections on doctoral supervision. I am using it here with a very specific focus as a tool for dialogue and planning with doctoral students. I would greatly encourage readers to turn to Fleener and Coble (2022) where the breadth, significance and impact of this approach is done more justice.



the supervisor-doctoral student relationship. The expanded futures cone can provide a tool to integrate more intersectional reflection into Lindén's (2020) typology of the doctoral student-orientated approach to supervision and act as a catalyst for the further development of this approach.

## **Conclusion**

The above thoughts on the use of futures cones are far from comprehensive. The intention of this piece was to reflect upon their possible use for dialogue and planning during doctoral supervision. By drawing on the basic futures cone, one can explore, and hopefully better understand, a) the goal(s) of the doctoral students (their preferred futures), b) the tasks and steps that must be undertaken to achieve this, c) who will undertake these tasks and d) how these perceptions relate to the goal(s). By adopting the expanded futures cone one can go beyond this and develop what Lindén (2020, p.4) describes as essential components of successful supervisor-doctoral student supervision, namely "emotional ties, with experiences of appreciation, concern and trust". It is with this in mind that I claim that Fleener's (2021) expanded futures cone is so enlightening, as "connectedness, relationship and context" are centralised (Fleener & Coble, 2022), placing the doctoral students' individual qualities and their development centre stage.

This paper has been divided based on the three supervision typologies described by Lindén (2020, pp. 13-14). This should not be read as that I see them as being clearly distinct as they are interconnected and interrelated. I have discussed them separately to allow for a focus on futures cones and how these can be useful for doctoral supervision, no matter what typology we lean towards. Fleener's cones (2021) and those of Galls et al. (2022) presented in this piece are but two of numerous futures cones which one can find in the Future Studies literature. They are very versatile tools, being used in a range of ways and in various disciplines for different ends. I hope this piece has highlighted some of these and that my reflection on their usefulness and versatility can open new spaces for dialogue and planning between supervisors and doctoral students, no matter what supervision style (or variation thereof) that one adopts.

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