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Academic press releases caught between theory and practice

Making sense of a contested science communication practice

PhD thesis

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Preface

It all began in Italy. In Florence where I attended my first Public Communication of Science and Technology Conference (PCST) in April 2012. This bi-annual conference organized by the international PCST network is unique in the sense that it addresses both science communication researchers and practitioners, including science journalists, thus capturing well the diverse field of science communication. A young and still emerging field, which, by the way, may be hard to figure out for newcomers.

I attended the PCST conference as a practitioner with an interest in science communication from the vantage point of a communications department at a large comprehensive university. I went to Florence to find input for my daily work as head of a news team responsible for coordinating the university's external science communication. I also saw a chance to meet scholars whom I only knew from the literature and as names listed in the references in my master's thesis from four years earlier.

Attending the PCST conference changed several things for me. For one thing, it updated my knowledge about science communication research and practice. Secondly, and perhaps most importantly, the conference challenged the practitioner's viewpoint I had brought along at the time. It made me reflect on the perceived innocence and neutrality of science communication activities at universities, which, in my experience thrive among many science communication practitioners and scientists, myself then no exception. Not surprisingly, the idea to pursue a PhD occurred somewhere in the skies between Florence and Copenhagen on my flight back from the conference.

In 2008, when I started working in the communications department at the University of Copenhagen after completing my master's degree in science communication, my first task was to improve the university's online presence in relation to science communication in both Danish and English for our national and international audiences. Ever since I decided to pursue a research career and become a doctoral student, I have been driven by a desire to better understand universities' preoccupation with communication of science to international audiences. Working as a communications officer at a Danish university, I was wondering why many universities (including the one I worked for) were so eager to get press coverage in international news media. Coverage that is often sought by means of press releases posted on international news services and, more recently, also promoted on social media channels with international reach such as Facebook and Twitter.

I knew that the prevailing view had for long been that public communication of science could be explained by a need for scientists to legitimize their spending of public funds. Even though this explanation cannot account for all activities, the legitimacy rationale to explain scientist participation in public communication of science would make good sense in a national context where both taxpayers and politicians watch local television and read national newspapers. Scientists and their institutions need national support in terms of

funds, legislation, students etc. as a license to operate. But when we move beyond borders, the national context falls short as a means of explaining reasons for communication activities. Paying taxes to allow governments to prioritize grants for publicly-funded research and higher education is a national matter and as such does not have much bearing on international audiences for science communication. Important pieces were thus missing if we wanted to explain why universities strive for visibility in international news media. This is where my PhD journey began. Puzzled by a communication practice that was seen to be on the rise but which we did not understand and which did not match the prevailing national understanding of science communication activities either.

When I began to review the literature to draft my research project about the use of press releases to communicate science, very few scholars otherwise engaged in studying science communication showed any interest in press releases. On the contrary, some scholars downright rejected the legitimacy of this science communication practice as well as public relations activities in science in general (see e.g. Nelkin, Göpfert, Weingart). Others had demonstrated the shortcomings of the assumption underlying the public understanding of science (PUS) approach, which implies that public(s) will accept and support science if they get the facts right and have sufficient knowledge about science. These scholars instead advocated for engagement and dialogue approaches to scientists' participation in public communication (see e.g. Irwin, Wynne, Horst and Davies), dissociating themselves from science communication practices such as academic press releases. Tellingly, Horst once explained to me when I asked why she seemed to dislike press releases: "There is not much dialogue in press releases, Charlotte". I interpreted her answer as: writing press releases was not the right thing to do and so had no research interest for science communication scholars either.

My first search for 'press release' combined with 'university' in the three journals dedicated to science communication research, *Public Understanding of Science*, *Science Communication* and *Journal of Science Communication* resulted in very few useful studies to start with.

I seemed to have spotted a gap but did not understand why this gap existed. I did not have much to lean on when I began my quest for answers to my research questions and, frankly, I found it quite difficult to navigate in the beginning. For how could I as an early career researcher develop a project about a subject that no one else really wanted to talk about? Which roadmap should I follow, which theoretical and methodological baggage should I carry along and who could I possibly ask to accompany me on a journey into such seemingly unattractive and uncharted territory? Doubts about how wise or safe my journey would be pop up regularly.

As the thesis shows, I managed to find my way and reappear in good shape and a whole lot wiser. While clinging to my initial research idea, my ticket to ride has brought me to many places and taught me many different methodological and theoretical languages, some of which turned out to be more useful for my

project than others. Likewise, I found good company and travel partners along the way too. At the many stations where I chose to make a stop, either to give a conference presentation or attend a PhD course or a summer school, I met peers who shared my research interests and were willing to discuss matters relating to my project.

Six years down the road, we are still few and far between, literally speaking. Nevertheless, my journey that began as a lonely scientist gradually transformed into forming relations with science communication researchers and communications practitioners from near and far. People who, like myself, find it valuable to investigate press releases from research institutions with an open mind to enhance our understanding of the roles science, scientists and their institutions play in society. The overall lack of interest in and knowledge about this science communication practice inspired me early on to draft my own map of this territory, combine existing theories in new ways and to literally pave my own way through the landscape. In this report, I account for the results of my work and for the choices I have made to get there.

Before I let you into my land of press releases to see which exotic jewels I have brought back from the journey, I would like to share an interesting observation with you. I have come to realize how much both I and the world around me have changed. During the time of writing the thesis, my research field has evolved considerably. Well-established science communication researchers are increasingly studying institutionalized science communication activities from new perspectives, encouraging our community to broaden the scope of research to understand more aspects of what is going on in contemporary science communication (Irwin and Horst 2017; Trench 2017). When it comes to shedding light on research institutions' roles in science communication, the literature is starting to gain momentum (Fährnich et al., forthcoming.; Entradas et al. 2018). Unlike six years ago, when I took off, researchers who decide to enter this landscape today can more easily follow in others' footsteps to find useful tips for places to go and activities to take part in.

My research project would most likely have turned out differently and perhaps more as I imagined it in the first place, had I understood the messy field of science communication research better when I set out and had the state of the art in this field been more as it is today. I understand, though, that the contribution I am making by submitting this PhD thesis would have been a good starting point for my project six years ago, and I guess this is how science works and should work. You plan to move straight ahead, but soon come to realize that the shortest way between two points is not necessarily a straight line. This might explain why you do not proceed either as fast or cover as long distances as you anticipated when you bought the ticket. All the same, I hope you will enjoy reading my work as much as I have enjoyed completing it.

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Thanks also to my many colleagues in the PCST network, who have encouraged me, given me valuable feedback and sometimes asked just the right question. We have met at conferences in Brazil, Turkey and New Zealand and I cannot imagine being without my science communication family ever again. Special thanks go to the President of the PCST network, Brian Trench, who early on gave me a simple but very effective guideline for my journey. Brian kindly urged me to use only sparingly the word *new* in my research. Just because something seemed new to me, someone else might already have been there. Thanks, Brian, for teaching me to acknowledge 'history' and to search for literature and 'giants' whose shoulders I could lean on before challenging what I saw.

A very special thank you to Emma Weitkamp, who was the first to join me on my quest for a better understanding of science public relations practices and who has become the best research friend one could possibly imagine. I look forward to our continued collaboration. Rasmus Munksgaard Andersen, who helped me handle large amounts of data in an intelligent way, also deserves my gratitude. Without Rasmus, this thesis for sure had not been the same.

Finally, it almost goes without saying how much I have appreciated the support from my family. There is no way I could have completed this journey without your comfort during rough times. Thanks to my husband Frank for putting up with me and my fancy idea to spend time doing research when he needed a helping hand around the house. Thanks to my creative songwriting son Sebastian for musical inspiration, which kept me on the upbeat track when I needed it the most, and many, many thanks to my wise and loving daughter Anne-Sofie with whom I share academic interests. I look forward to our future collaborations on collective agency and organizational actorhood. Finishing this thesis can only count as a new beginning.

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SUMMARIES

Dansk resumé

Dette ph.d.-projekt handler om forskningsformidling og undersøger den akademiske pressemeddelelse som forskningsformidlingspraksis. Disse pressemeddelelser er særligt kendetegnet ved deres videnskabelige indhold og deres organisatoriske kontekst. De bruges til at formidle forskningsresultater, der for nylig er publiceret i videnskabelige tidsskrifter. Forskningsinstitutioner bruger i stigende grad denne formidlingsform til at fortælle, hvad de laver, og hvem de er. Til trods for deres fremtrædende rolle som formidlingsform i videnskaben har de ikke fået meget opmærksomhed blandt dem, der forsker i forskningsformidling.

For at øge vores viden om, hvordan den stigende brug af akademiske pressemeddelelser påvirker relationer mellem videnskaben og samfundet i en tid, hvor nyhedsmedier villigt kopierer indhold fra universiteters pressemeddelelser, stiller dette projekt to spørgsmål. Det ene adresserer de konsekvenser, akademiske pressemeddelelser har for, hvordan offentligheden forstår videnskaben og deres konsekvenser for videnskaben som sådan. Det andet adresserer, hvordan en større teoretisk indsigt i denne særlige formidlingspraksis kan ændre synet på formidling fra forskningsinstitutioner blandt dem, der forsker i forskningsformidling.

Med udgangspunkt i den internationale online-nyhedsservice EurekAlert! og pressemeddelelsen som analyseenhed analyserede dette projekt de flere end 300.000 akademiske pressemeddelelser, der mellem 1996 og 2016 er offentliggjort på EurekAlert! Som foretrukken nyhedskilde blandt journalister verden over har EurekAlert! indflydelse på, hvordan samfundet forstår videnskaben. Tilsvarende har de kriterier, forskningsinstitutioner udvælger forskningshistorier efter, når de benytter EurekAlert! til deres formidling, betydning for, hvordan offentligheden forstår videnskaben.

Pressemeddelelser benyttes i stigende grad til formidling af forskning. Dette projekt viser, at denne formidlingsform har alvorlige konsekvenser for både videnskaben og samfundet generelt. EurekAlert! er domineret af medicinsk forskning udført af eliteuniversiteter og publiceret i top-tidsskrifter. Det betyder, at EurekAlert! som nyhedskilde giver et skævt billede af, hvad videnskab er. Projektet fandt også, at måden hvorpå videnskabelige resultater kommunikerer afhænger af, hvilken forskningsinstitution, der kommunikerer. Projektet konkluderede desuden, at akademiske pressemeddelelser kan ses som spejlbilleder af, hvordan den moderne videnskab fungerer. De skal forstås som komplekse tekster, der gør meget mere end at popularisere videnskabelig viden. De spiller en vigtig rolle i forskningsinstitutioners identitetsprocesser. Endelig har de vist sig at influere på magtrelationer mellem institutioner og forskningsområder på en sådan måde, at det på lang sigt kan få negative konsekvenser for videnskabens evne til at bidrage til løsning af komplekse samfundsudfordringer.

Der er derfor god grund til at betragte det stigende antal forskningsinstitutioner, der offentliggør voksende mængder af akademiske pressemeddelelser på EurekAlert!, med en vis bekymring. Ligesom der er grund til at advare om konsekvenserne af denne formidlingspraksis overfor alle, der krydser dens vej. Det gælder forskere, der studerer formidlingspraksisser; kommunikationsmedarbejdere, der skriver pressemeddelelser om forskningsresultater; alle de, der har forventninger til forskeres formidlingsindsats og ikke mindst alle dem, der får indsigt i videnskab gennem akademiske pressemeddelelser.

English Summary

This PhD project is about science communication and has explored the academic press release as a contemporary science communication practice. These press releases are characterized by their scientific content as well as their organizational context. They are used to communicate new research findings recently published in scientific journals, and research organizations increasingly use this online practice to communicate what they do and who they are. Despite its prominence in contemporary science, this practice has received little attention among science communication scholars.

To enhance our understanding of how the increasing use of academic press releases influences science and society relations at a time when news media willingly copy-paste press releases from trusted sources such as universities, the project has asked two questions and followed two lines of inquiry, an empirical and a theoretical line. One question addresses the consequences of academic press releases for public constructs of science, and for science as such. The other question addresses how in-depth knowledge about academic press releases influences how science communication scholars may perceive contemporary science communication emerging from academic organizations.

With the press release as the unit of analysis and the international, online news service EurekAlert! as the empirical focal point, the project has analyzed the more than 300,000 academic press releases uploaded on EurekAlert! between 1996 and 2016. As a preferred news source for journalists around the globe, EurekAlert! impacts how science is perceived in society. In the same vein, the choices and story selections made by research organizations using EurekAlert! have impact on the public understanding of science.

As a science communication practice currently gaining ground, the project has found that academic press releases pose serious problems for both science and society. EurekAlert! is dominated by medical research from elite universities published in top-journals and therefore providing a skewed resource for public constructs of science. The project has also found that facts (the science) and actors (the organization) intertwine in academic press releases to the extent that how society come to perceive science also depends on who is telling the story. However, the project also concluded that academic press releases mirror how contemporary science operates and should be understood as complex texts that do much more than popularize science. They play important roles in identity formation processes for the organizations, and what

is worse, they influence power struggles among organizations and research fields in ways that could end up affecting how science, in the long run, can contribute to resolving societal challenges. Therefore, we can only observe the growing numbers of organizations posting increasing amounts of press releases on EurekAlert! with some concern, and urge everyone who encounters this practice to be aware of the consequences. This includes those who study science communication practices, those who produce academic press releases, those who expect academia to communicate and not least all those who get to know about science this way.