Laudation Prof. Eric von Hippel

von Prof. Dr. Peter Witt

Magnifizenz, Spectabilis, sehr geehrter Herr Regierungspräsident Büssow, dear guests, dear Professor von Hippel,

It is my personal privilege and my honor to introduce this year's laureate for the Schumpeter School Award at the University of Wuppertal to you. It is, as you all know already, Prof. Eric von Hippel. Professor von Hippel is the T. Wilson Professor of Management at MIT's Sloan School of Management and a Professor of Engineering Systems at MIT.

In a minute, we will take a closer look at Prof. Hippel's truly impressive academic work. This work makes him the ideal candidate for our award, although, strictly speaking, Eric is as anti-Schumpeterian as he could be. But let me first have a brief look at his family background. I do so because this family background may explain a little bit of Eric von Hippel's career.

Our laureate belongs to a family with many famous academics. His father, Arthur von Hippel, was a materials scientists and physicist, born in Rostock, Germany. He was a pioneer in the study of dieelectrics and semiconductors as well a codeveloper of radar in World War II, after having moved to the U.S. in 1936. Just like his son, Arthur von Hippel spent most of his career as a professor at MIT.

In one of his books, Eric von Hippel tells a little story about his father coming down from his study upstairs to have a cup of coffee in the kitchen. While doing so, he would throw up his hands and say, to no one in particular: "Why do I choose to work on such difficult problems?" And then he would smile happily.

Certainly, family experiences like this inspired Eric to also become a researcher and to also work on relevant, but difficult problems. Arthur von Hippel died in 2003 at the age of 105, having lived to see three different centuries. I very much hope that his son Eric will follow the role model of his father in this respect as well. Many more members of the von Hippel family are famous researchers. Eric von Hippel has four siblings. His younger brother holds the chair of Public and International Affairs at Princeton University. His elder brother was a Professor of Molecular Biology at the University of Oregon. His third brother was a heart surgeon at Anchorage University Hospital, Alaska. His sister is a writer. Let me finally mention one more famous family member: Eric's mother, Dagmar von Hippel, is the daughter of a Nobel Prize winner in physics, James Franck. I conclude from this brief look at the family background of

our laureate that stellar academic performance has always been the norm in this family.

Let us now look at Professor Eric von Hippel himself. He holds a B.A. from Harvard and a Masters in Mechanical Engineering from MIT. Colleagues and guests who have been following our Schumpeter School Award for a longer time may realize a well-known pattern here. If you want to be successful in management research, you may wish to learn something else, something decent, first. Professor Dietmar Harhoff, our Schumpeter School Award winner from 2013, who is here today, did the same. He is also an engineer by education.

Professor von Hippel did not only study engineering, he also did what good engineers like to do most. He filed patents, four in total, and he co-founded a high-tech company. Luckily, at least for academia, Eric then decided to discontinue his entrepreneurial career and became a scholar of innovation management. The first milestone in this career was his Ph.D. in innovation management from Carnegie Mellon University, which he got in 1974. He moved on to become a professor at MIT's Sloan School and has been teaching there ever since. I conclude that life at MIT cannot be so bad.

We honor Professor von Hippel today with the Schumpeter School Award 2017 for his groundbreaking and outstanding contributions to innovation management research. They all center on the concept of user-generated innovations. These contributions come in many forms, some of which I would like to explore in more detail. We start with the obvious one, publications in scientific journals.

Eric's record of accomplishment in this respect is breathtaking. He has regularly published articles in the top journals of our field for more than forty years now. And I see no indication that he may ever slow down. It is fully impossible to give a complete overview on all of Eric's scientific articles in this short laudation. Therefore, I will only try to give you a flavor. He has published 10 articles in Management Science, 5 in Organization Science, 20 in Research Policy, and many others in outlets like the Journal of Marketing, the Journal of Product Innovation Management, Sloan Management Review and similarly prestigious journals.

The other form of outstanding contributions to innovation management research, which I would like to mention, may sound a little bit old-fashioned. I am talking about books. Professor von Hippel has written three books. In fact, he has the nice habit to summarize his findings every 12 to 15 years in a new book. The most recent one has been published only a few months ago. It is called "Free innovation" and I recommend it to everyone here in the room. Free innovation depicts innovations developed and given away by consumers as a free good with resulting increases in social welfare. I will get back to this theory in a minute. Our laureate will probably also share some insights out of his most recent book with us.

Another nice habit of Professor von Hippel, other than regularly writing great articles and great books, is to offer his books free of charge. You can simply download them. If readers prefer to buy Eric's work in the form of a real book, which they can put on their bookshelf, next to other classics, that is also possible. This is what I did: First, I downloaded all three books. Then, I felt a little bad. It seemed unfair to download three books from a famous colleague and not pay a penny. Thus, I bought one real book (the newest one) to make myself feel better, to make my bookshelf look better and to be able to show a real von Hippel book to my daughters. Eric, I sincerely hope that 1 out of 3 is an acceptable ratio for you!

Needless to say: The impact of Eric von Hippel's books has been huge. Not only students and fellow academics are reading them. Politicians and managers also refer to these books frequently. Eric's policy recommendations have gained widespread attention all over the world. The same is true, by the way, for his Youtube lectures, which you may want to have a look if you want to learn more about user innovations. MIT is one of the few universities offering these open online courses for free, and Eric's videos have always been in strong demand.

A third indication of outstanding scientific achievements is the huge impact, which Professor von Hippel had and continues to have on the research community. I could not easily think of any other scholar who has such a dense network of international co-operations. Eric has worked as a guest professor in Australia, Canada, China, and Germany. He is engaged in research projects with colleagues from all over the world.

His ties to colleagues in the German-speaking world are particularly strong. He supported young researchers in their post-doc endeavors. They did not only get the chance to stay for a while at the MIT, they were also given the opportunity to do joint work and publish beautiful articles with Professor von Hippel. Many of these researchers became full professors of innovation management at prestigious universities later. Thus, it was easy for me to convince them to join us today for the Award ceremony and to meet their friend again.

In fact, the more difficult thing was to place this ceremony into Eric's very busy international schedule. He came in to Wuppertal from Beijing, China. Tomorrow, he will travel to the United Arab Emirates as a direct consultant to their government. Afterwards, Eric will continue his journey to Innsbruck, Austria. I take all this as another clear indication that cutting-edge research happens in global cooperation and that Professor von Hippel is beyond any doubt the leading figure in research on user innovations.

Given all this evidence of outstanding academic achievements, it is probably no surprise to anyone in this room that other prestigious institutions have also honored Professor von Hippel. He holds three honorary doctorates, one from Ludwig-Maximilians University in Munich (2004), one from Copenhagen Business School (2007) and one from the Technical University in Hamburg-Harburg (2013). Eric got

the Innovation Luminary Award from the European Union in 2015. He won the Humboldt Foundation Research Prize in 2013. He serves on the editorial or advisory boards of eight high-profile academic journals.

At the heart of Professor von Hippel's work on innovation management are what he calls user innovations. Traditional innovation management research postulated that manufacturers are the innovators, because they have the R&D facilities, the expertise and the financial means to do so. In fact, this is exactly what Joseph Schumpeter said. However, in many markets, major product improvements and ideas for radically new products do not come from manufacturers. Instead, users make adjustments on products and services to meet their own special needs. In doing so, these users innovate. They create new products or services themselves, rather than waiting for manufacturers to innovate. A famous example is mountain bikes.

Eric von Hippel was one of the first to notice this trend and explore it scientifically. He found that users are in fact the first to develop most new industrial and consumer products. That is why I said earlier that Eric is actually anti-Schumpeterian.

In his first book, "The Sources of Innovation", published in 1988, Eric carefully demonstrates the user innovation histories in industries like scientific instruments, semiconductors, pultrusion process machinery, tractor shovels, engineering plastics, and plastic additives. He did not only prove that user innovations are of significant importance, his research also showed that it is possible to predict the source of innovation. His hypothesis is that those who benefit most from a new solution will develop innovations. In other words, the more heterogeneous users' needs are, the less likely it is that the "one size fits all"-approach of traditional R&D will be a successful source of innovation and the more user innovation we will see.

This led to the theory of lead users. If I were to name one breakthrough theory that the name Eric von Hippel is connected with forever, it would be this lead user theory. Similarly, if I was forced to select his one most influential paper so far, I would go for the article "Lead Users: A Source of Novel Product Concepts", which he alone authored and published in Management Science in 1986.

Lead users innovate either because they have stronger needs for improved product performance than the other users on the market or because they feel a specific need earlier than others do. While manufacturers expect to benefit from *selling* innovations, users expect to benefit from *using* them. They do not have to sell anything. Still, many of the innovations reported by lead users are commercially attractive. Other users would also benefit from using them. Thus, manufacturers have an incentive to identify lead users early on, support them in their activities and commercialize the solutions they create. The core competence, which innovating manufacturers need in a world of user innovations, then shifts away from R&D. The ability to identify lead users becomes crucial instead.

Furthermore, Eric von Hippel showed that the internet makes it easier for consumers to innovate. User innovations are becoming more visible as well. The title of Eric's second book, "Democratizing Innovation", which was published in 2005, nicely expresses this idea. Users, be they firms or individual consumers, are increasingly able to innovate for themselves. They can easily exchange information with other users. Their solutions achieve widespread and quick diffusion because they do not protect their intellectual property. Rather, users freely reveal what they have developed to others. Freely revealing innovative solutions creates innovation communities where participants aim at reputation and not so much at making a profit.

This democratization of innovation has important implications for marketing. Manufacturers should no longer rely on the ideas of their engineers in R&D-departments or on customer surveys to find out what the market wants. Instead, they need to engage in communities and find those lead users who are creating tomorrow's products and services.

In his book and in related articles, Professor von Hippel has suggested toolkits as one suitable instrument for manufacturers to do that. Toolkits are integrated sets of product design, prototyping, and design testing tools. They are intended for use by end users. The beauty of toolkits is that they enable non-specialists to design high-quality and producible products. Typically, they contain features that guide users as they work. Once the user's design work is finished, the toolkit must be convertible without error into the language of production systems. This may sound easier than it actually is. Even something simple like a recipe for a Mexican sauce, which a chef develops, cannot be utilized easily or without error for a large food-manufacturing facility. Nestlé succeeded in doing this only with the help of a toolkit.

In his most recent book, and in the many scientific papers published in between the publication dates of book two and book three, Eric von Hippel has further refined and extended his theory. The term "free innovation" reflects the idea that many users innovate and give away their innovations as a free good. However, we should be precise here. Innovators freely share design information with others, not free copies of physical products. Free innovators engage in innovation efforts without any interest in money. They are what Eric calls "self-rewarded". As users, they benefit from using the innovation themselves. As helpers, they benefit from the enjoyment, the learning, and the altruistic satisfaction to support others.

Professor von Hippel's findings on free innovation have equally powerful implications like his earlier work. First, government statistics on innovations are misleading as long as they exclude free innovations from the household sector. Second, free innovation will become more and more important as a complement to innovations from manufacturers. Third, social welfare will benefit from public policies that encourage manufacturers to cooperate with free innovators. Fourth, governments may wish to get rid of regulations and legislation, which reduce the freedom of free innovators to exchange information and cooperate with others.

Dear colleagues and guests, I hope that I was able to convince everyone that the Schumpeter School and the Schumpeter School Foundation were indeed successful in reaching their main goal with this event. With Professor Eric von Hippel, we honor an internationally recognized, outstanding scholar in the field of innovation management. He has not only made significant contributions to this field, he has pioneered many of the theories and concepts, which researchers all over the world apply today.

I could easily continue and say much more about Eric von Hippel's academic work. However, it is time for me to stop talking and leave the floor to our laureate. I know that he can explain his ideas much better than I could. Dear Eric, we thank you for being here with us in Wuppertal today. Please accept our sincere congratulations for winning the Schumpeter School Award 2017. We are very much looking forward to your speech. You have the floor.