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ENJOYING MACHINES

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1 Why is pleasure important?

One of the biggest surprises about modern technology is not how productive it makes us, or how it has revolutionized the workplace, but how enjoyable it is. The great success of new technologies—social networking, computer graphics, wireless networks—is in how they create *pleasure* in our lives. People taking a walk in a forest or watching a game commonly use a GPS device to track where they are, or a phone to record a video clip of the game. The predominant use of technology worldwide is not for war or productivity, but for *enjoyment*. Entire categories of leisure activities—such as sport and television—could not exist without technology.

This book investigates how leisure takes place, the ways in which many forms of leisure depend on technology, and how we might design technology to better support enjoyment. If we are interested in enjoyment, it is natural that we should turn to understanding our relationship with technology too—our enjoyment is *saturated* with technology. In this book we examine that relationship and how technology has become such an integral part of our enjoyment. Through studies of enjoyment experiences we describe what pleasure actually is—by going to the places where people enjoy themselves and documenting what they do. Our main argument is that pleasure is fundamentally social in nature—not only do we enjoy ourselves with others; we need to be with others to understand what might be enjoyable. We learn how to enjoy things from others as a set of skills. To enjoy a sightseeing holiday, or the exhilaration of playing a video game, you must learn the skills of appreciation and achievement from others. With a combination of theoretical and empirical research, we tease out why and how we have molded technology, particularly computers, to support our enjoyment. Why is it that so many of the applications of the latest technologies support enjoyment? In answering this question we will also start to tease apart what enjoyment is in its modern forms, how it interacts with leisure, and what role businesses and state enterprises have. Our purposes

here are conceptual and empirical (we want to understand what enjoyment is but also to study the forms that leisure takes), but also practical (we want to find out how to better design enjoyable technology).

To help us in this examination we will draw widely on recent research that has critically examined the role of enjoyment and leisure in a range of settings. This work spans a range of fields, including economics, psychology, and leisure studies. In different ways, these fields have put at center stage questions about why we enjoy certain activities, how much we enjoy them, and what broader effect these questions have on the decisions we make. Indeed, in the last ten years there has been something of a return to serious examination of what role enjoyment plays in our lives. We will also go back to work done in the nineteenth century, when utilitarian philosophers argued about how society should be organized to maximize pleasure. These concerns and arguments can be found as far back as antiquity—for example, in Plato's and Aristotle's arguments about "the good life."

In the most recent instantiations, each discipline has taken to examining pleasure in its own way. Psychology has attempted to measure pleasure and to find its correspondence with brain activity or with reports of how enjoyable we found different activities. Examinations of the brain chemistry involved in pleasure have revealed in detail how it is that some brain states (or processes) come to be associated with reports of pleasure and others do not. The organization of enjoyment has also gained considerable attention. Particular attention has been paid to "flow states"—states of mind in which one is fully engrossed in an activity. Economics has focused on this general organization on a societal level, and particularly on measuring enjoyment across populations and countries. What government policies might we choose to encourage the enjoyment of different people as measured by nationwide surveys? How have enjoyment and pleasure changed as people have become wealthier? Economists have documented a number of paradoxes in which the decisions we make, either collectively (such as favoring economic growth over equality) or individually (commuting a long distance to work), end up with both individuals and societies in a suboptimal state.

In sociology, we find talk of "false needs." Drawing on Marx's term "false consciousness," this means the ways in which we are led into desiring what we cannot have—a "euphoria in unhappiness," as Marcuse put it. As is sometimes the case in such critical analysis, we find that the job of disentangling false from real pleasures falls to the academically trained. We have some skepticism about their expertise in this matter.

In these different research fields these concerns are on the whole valid, but our interests here are somewhat different—both narrower and more general. They are narrower in that we will retain a focus on *technology* and the role of enjoyable technology in life. Yet our concerns are also more general in that much of this work leaves relatively unexamined the concept of what *enjoyment* is. Both psychology and economics have assumptions about enjoyment that we find puzzling and somewhat problematic. The concept of enjoyment there—as a variable that can be read in individuals and then in amalgamations of individuals—is difficult in a number of ways. As we will argue, our accounts of how much we are enjoying cannot be simply relied upon—it is valuable to go and take part in enjoyment itself and to see how it is organized, since we are all aware that at times our accounts of enjoyment are colored by who is doing the asking. The answers we get about enjoyment are themselves part and parcel of managing the enjoyment of ourselves and others. Often the answer to the question "Are you enjoying yourself?" is not some sort of readout of a variable inside the head, but an answer that balances the requirements of politeness, care, and attention to others, as well as our own desires for what we could do next.

We will attempt to avoid these traps—we seek to avoid reducing leisure to an easily measurable "mass variable," as well as to avoid treating participants' accounts of leisure as all that is needed to understand the phenomena. We also will distance ourselves from skepticism toward pleasure—pleasure is grossly observable in many of the things that are done in contemporary society. We do not need a jury to tell us that we enjoy a pint of ale or that heroin addiction can be problematic. So empirically the starting point of this book is straightforward: we will travel with people who are enjoying themselves in different situations, see how they recognize that, and watch what they do. One site we focus on is what gets called "leisure," but we will seek the broadest possible description of leisure. By describing the tangled worlds of enjoyment and technology, we will also seek to produce a more sophisticated account of enjoyment.

We have been studying and building technologies for enjoyment and leisure activities for ten years, building systems to support a wide variety of leisure activities—among them sport, tourism, game playing, hunting, and television watching. We have spent time closely examining what is involved in each of those activities, taking part in the activity in order to understand where enjoyment comes from. In turn, we have built technologies to support these activities and make them more pleasurable, but also to draw lessons to build systems that can support new leisure pursuits. We have built systems that allow users to share music in new ways, to visit

places together online, and to share and discuss video they have recorded. We also have built game-like innovations—so-called pervasive games that move away from the current mode of game playing as predominantly something carried out at home while facing a glass screen. Our method is somewhat unusual, departing from the principle of not disturbing those one is studying. We go as far as to build custom computer systems, give them to those we are studying, and see what happens. Paying attention to the details of what is involved (and what would make any attempts at supporting that activity fail) is, we think, beneficial for both social science and technical purposes.

Although we will talk about our studies of game playing, it is important to realize that we have gone beyond games. Games are not the main focus of the book. Although games are an important part of understanding enjoyment around technology, to focus only on games would be to overly narrow the consideration of all the different ways in which technology is involved in leisure and in enjoyable pursuits. Indeed, if we think about how friendship and companionship are supported in different ways on Facebook, or how a telephone call can bring us immense pleasure as it connects us with old friends, we can see that games are only one part of the role that technology is playing in our enjoyable lives. So enjoyment and technology includes but goes beyond games. If games are too narrow a conception of the role of technology in our enjoyable lives, then in turn to only think of enjoyment as something that takes place during leisure is also too narrow. There are a range of different terms that play a role in thinking and talking about the activities we will be documenting. Keeping in touch with friends, for example, might not be something that we would describe as "leisure," although it can be greatly satisfying, just as many leisure activities can at times lack much in the way of enjoyment.

Overall, we document "the hedonic life"—those activities in which a primary or major focus of what we are doing is that they are enjoyable in some way. Talking about the hedonic life puts attention on the way in which enjoyment is a part of a range of different activities, not just ones that charge an admittance fee or take place during our vacation time. Our pursuit in this book of the various ways we enjoy technology in our lives will take us to a wide range of places, not all of them obviously enjoyable. We hope the reader will be satisfied with our broad focus on leisure, enjoyment, and time spent pursuing enjoyment in various forms.

Nietzsche pointed out that at some point all philosophies become biographical, and the present book certainly is influenced by the backgrounds of the authors (as sociologists and computer scientists). From sociology we

take a strong interest in the social organization of activity. Why and how we do things is not determined by what goes on "inside our minds," or even by the workings of the economy. (If it were, we would have to ask why there is such diversity in the nominally capitalist countries of the world.) We take sociology's abiding interest in the social organization of our life as a means of propelling an empirical program of study—the world, we would argue, is out there if only we are careful enough to take a chance to look at it. Our second influence comes from those who are concerned with technology in its many forms—more precisely, from those who have most directly focused on the design of technology and on how technology might be better designed to fit with the different activities that human beings find technology embroiled in. That research usually takes place in a set of research fields grouped around what is known by the slightly clumsy name "human-computer interaction" (HCI). It is here that we will extract some of the most thoughtful work that has engaged with our different behaviors with and through technology. In particular, there has been a nascent engagement with the experiences that technology supports, in particular enjoyable experiences. Yet what we have drawn on that is most useful from the field of HCI is a set of methods for going about studying the different ways technology and enjoyment interact.

To a casual reader the combination of sociology and computer science might seem a peculiar one. We have been fortunate (as it is not something that we would have foreseen) that it is in this very combination that technology has come to have its biggest impacts. Email, mobile phones, and Facebook are social technologies that support connection and communication. Moreover, the agents of social change in our world have been largely technical in recent years. This is not to fall into a deterministic argument. But if one wants to understand the media, one should understand social networking technology, and if one wants to understand social class, one should have an eye on mobile phones.

Why do we need to look at pleasure?

A critical reader might ask "Why should we spend attention on enjoyment, and why with technology?" Technology has a role to play here, but so it is with nearly everything that we do. Is it not the case that for some people leisure is an opportunity to get away from technology? This is an important point. The pleasures of getting away from technology—of simplicity—are rich. We would not want to appear addicted to our systems and devices.

For now we will just note that technology can be simplicity, even if in many of its incarnations it can seem anything but. After all, chairs are quite a fundamental part of our lives, and we don't seek to get away from them. When we leave the city, our walking is tracked and measured to the abilities of waterproof shoes. Our shoes and the paths that we walk on are planned and produced by computers. It is difficult to escape technology in our pleasure—for better or worse, our hedonic life has technology through and through.

Enjoyment is in many ways a fundamental part of our lives. We base our decisions about what we are going to do, and why, on enjoyment, or at least that is how we describe those decisions to others. In industry, enterprises based on enjoyment—the media, tourism, hospitality, bars, restaurants—certainly dominate others; we would make a rough guess (assisted by such fine documents as the classification of employment) that a majority of us are employed in one way or other in enterprises that are focused on the enjoyment of others. Even in enterprises that are not—that supply basic needs and commodities, or that help organizations more focused on efficiency—we often find that people take pleasure in their jobs, or in a finesse that makes one product or service more successful than another.

Moreover, to ignore pleasure is to lose so much of our lives and our decisions as to make much life not only anodyne but nearly understandable. It is almost as if one has a study of social life more fitting to the turn of the last century—one where the bare minimums of making do, of being without want, are the primary priority of life. Yet this is not the case for the vast majority of the world. While of course living standards are unevenly distributed to an unpleasant degree, what are we to say to the fact that over three quarters of adults in the world now own a mobile phone? Or the fact that only a very small proportion of the people in the world don't get enough calories, indeed many fewer than the number that consume too many? This should bring home that the world's problems are not, on the whole, problems of the satisfaction of basic needs, pressing though such needs are for some. Misery, sadly, is still widespread, but we may well find that its cause is not something to be solved by more food, but by a more subtle understanding of the sources of pleasure in life.

We would argue that the absence of an interest in pleasure has made many fields of social science research at times disoriented and unable to understand much about the phenomena under study. The sociology of the family, for example, has focused so much on the functional roles that families play in society that it has paid much less attention to the simple

pleasures that we find in seeing our brothers or parents or children at family reunions. Much can be written about how this functions in society, but we must also pay some attention to how much pleasure family gives to many people.

In some ways, our interest in pleasure cuts across the thrust of recent social science work. Take, for example, Schüll's otherwise excellent book *Addiction by Design* (2012). This book documents in refreshing detail the ways in which gambling machines have come to dominate gambling, with distressing effects on problem gamblers. Clearly the gambling industry is gorging itself on the money of those who can least afford it. Yet what is almost completely absent from *Addiction by Design* is any sense that a casino could be enjoyed in a non-problematic way. The book barely acknowledges that a majority of users of these machines enjoy them as part of wider social activities. Schüll defines pleasure as a product of mechanical manipulation that has distressing consequences for those involved. Yet this is social science as *distortion*: a world where enjoyment is erased and replaced with a social science fable of the ravenous profit motive at work. This sort of misanthropic distortion of pleasure can also be seen in work such as Grazian's (2008) ethnographic study of the nightlife of college undergraduates. Again we see any possibility of enjoyment as a valuable part of these activities erased in favor of a "standard" social science narrative of life—nightlife in this case—as corporate control. As one reviewer of Grazian's book argues (Rigakos 2008), if the students he studies are the dopes he presents them as, surely we all are dopes.

While we will have many critical things to say about the social sciences and the absence of pleasure that they suffer from, our book is positioned between the worlds of technology and social science—we are also interested in the importance of enjoyment for computer science. Yet what importance can pleasure have for computer science? This might seem an unusual application—isn't computer science more concerned with algorithms and efficiency? We would start by arguing for the importance of taking seriously the applications of the technologies of computer science and following through and connecting these applications with what computer science does. This has never been a particularly popular approach within computer science, a field that has, on and off, tried to style itself in the form of an objective science that (much like mathematics) deals with fundamentals and universals, or at the very least with complex engineering problems that conceptually solve problems of how and what can be calculated. Yet the attractions of funding from government usually come with some sort of demand that at least some effort be made to talk to, or find a use for one's

efforts in, the world outside pure science. This has encouraged computer scientists in their efforts to convince others that their favorite enterprise or gadget might not just be a cunning mathematical game or puzzle, but might be used (say) to speed up some common calculation, or might have applications in the arms industry or in finance.

Our mischievous point would be simply that we should take these moves seriously, and that research about the applications of computer science should be part of computer science. Not just so we can attract funding, and not just because we worry about the "social responsibility" of what we are doing. Rather, because we can think of and direct what we do so that we can learn how to do what we do better. Interesting technical problems are not just those that arise abstractly from calculations, arguments, or discoveries. Science, in our view, exists not in isolation, but as a practice threaded through the world it is in. Though this is not a commonplace view, we see this world as social as much as it is physical. The physical limits of computer science are paralleled by social limits that constrain and enable computer science problems. Security and cryptography exist because we live in a society where there is naturally competition among individuals, organizations, and countries for various resources and products. It is conflicts of various forms—many of them unavoidable and many healthy—that result in a social need for cryptography of various sorts, and in a host of computer science issues of wide importance and interest. Yet these demands are not outcomes of the physical nature of the world; rather, they are outcomes of the nature of the social world.

In a similar way, we would argue that understanding the social world and "real world" problems can be positive for the project of computer science. Interesting problems are not only those that come from internal problems and concerns of computer science, but also those that take their life from the application of different technological systems. Indeed, nearly every successful area of computer science can trace some of its energy, some of the science discovered, to the application of particular discoveries. Thus, computer science gains much from learning about the applications of its technologies—indeed, one cannot clearly conceive of computer science without thinking of its applications.

The second part of our argument is that if we think about these applications then we very quickly come across enjoyment as perhaps the biggest application area of computer science. Games, films, music, file sharing, social networking, networking, and so on—we would go as far as to say that the applications of computer science mainly support enjoyment in its various manifestations. As rather blunt evidence we might consider that

more computers were sold last year in the United States for use in homes than for use in offices. This is not even to include the 40 million or so game consoles, or the 300 million mobile phones. Of course, because the state is the predominant source of funding for computer science, we might see an unhealthy bias in favor of work applications of technology (a point we return to in our final chapter). Yet this should not mislead us—computer science is in the business of enjoyment as much as nearly any other science. So if computer science takes its applications seriously, and the applications of computer science have to do with enjoyment, then it follows that it is worthwhile to spend some time understanding what enjoyment is. Computer science, under this remit, offers new possibilities for learning about a family of new applications and problem areas, and for generating scores of new subfields tackling problems that come from the study of pleasures and technology. Pleasure therefore is of interest to both sociology and computer science.

Another concern might be that as a concept pleasure is insufficient to enable analysis of the numerous applications that we have highlighted. Is it a concept that is sufficient for analysis? Is it (like, say, "activity") so broad that it encompasses nearly any sort of combination of things we do, sounding intellectual and grand but giving us only the most marginal of analytic purchase? In sociology, for example, pleasure doesn't seem to have been given as much attention as leisure. Is 'leisure' a better term for our subject? If one wants to find leisure, of course, one can go and round up people employed in the leisure industry. One could find oneself on holiday, or at an amusement park. Yet much eludes a focus on leisure. Take cooking—a cooking holiday would be part of leisure, but one would assume that the routines of pasta and porridge would not. And technology fits unevenly into this picture. As we mentioned above, video games seem to fit as leisure, but not social networking with Facebook or whatever other contemporary tool one prefers. For our interests, although leisure helpfully turns our attention away from work, it is too narrow.

A program

Now let us outline the goals of the book. The enterprise we are attempting here is programmatic. We envisage a new empirical program for studying leisure and enjoyment, the roots of which we take from our existing work. We have a range of principles that we take to be foundational to what we are doing.

The first goal is to study the contents of leisure and resist reduction to summary or quantization. By this we mean that the starting point of an empirical program should be describing in some detail what is involved in various leisure pursuits and enjoyable activities. This might seem an obvious approach in many ways. After all, why would one undertake an examination of enjoyment without this close attention? However, because of our close experiences with enjoyment—most of us, after all, enjoy ourselves at some point—it can seem that we already have enough general experience that we can rely on our intuitions. This is compounded by the impetus for generalization and quantization in many disciplines. Although this can yield valuable insights, it can lead to misunderstandings if we don't spend time thinking about what enjoyment is in actual cases and if we don't pay enough attention to the details.

The second goal is to focus on the *members' methods* of social experience. By this we mean the range of different ways in which we recognize and manage the enjoyable parts of our lives—that is, how we enjoy ourselves. Our argument is that enjoyable experiences are not some sort of mysterious "ghost in the machine" that we cannot get at; rather, they are something we examine every day in ourselves and in those around us. Our focus is, then, on studying how it is that we enjoy different things and how we manage those experiences with other people.

Our third goal is to study leisure empirically—to go out and look at the various forms leisure takes, and why it is organized as it is. Our own bias is for ethnography—a particular set of methods based on participating in and watching different experiences at first hand and recording them in detail. These methods are qualitative, descriptive, and time consuming, but we would argue that they are among the few methods available for getting at the sorts of complexities we find in enjoyable experiences. Doing this sort of empirical work is one way in which we seek to avoid reducing enjoyment to unified categories—something we will talk about later as the "philosopher's problem." Enjoyment seems to be such a fundamental part of our lives that many philosophers have taken it upon themselves to seek to define what enjoyment is, or what it consists of. Of course there is a role for this sort of analysis. But when confronted by the variety of forms that enjoyment takes, it leads to overly simple views of what is a variety of different practices.

A fourth goal of our program is, in some contradiction to our other goals, to avoid relying on accounts given by those involved in enjoyment. Our point here is that the descriptions and answers to questions of the investigating analysts given by those who take part in leisure, enjoyment,

or really just about any activity are conditioned by whatever is going on. People often give short renditions and explanations of experiences, but this does not mean that enjoyment in the moment can be so reduced—these are "glosses." Accounts are often moral accounts, produced relative to the regulatory framework that manages so much discussion of enjoyment. We do not mean to say that we should ignore what people do; we mean to say that we should study it in the context of the activity being examined. Take hunting, for example. There are so many moral debates around the killing of animals (even though nearly all of us depend on it for either our clothing or our food) that to just ask questions such as "Do you enjoy killing animals?" would not be likely to get at what is going on in a hunt.

Together these goals constitute what we call *the empirical program of pleasure*—a program of study based on studying pleasure that does not seek to reduce it to other phenomena. Each chapter in this book, in its own way, contributes to how we might proceed in such a program. We will cover not only empirical examples but also the methods one should employ in such a program, as well as theoretically engaging with questions of what enjoyment is and how we should talk about it.

A preview of the chapters

In chapter 2 we grapple theoretically with what enjoyment is, building what we call an *institutional model of enjoyment*. This is a way of thinking about enjoyment that does not reduce it to a momentary event or flash inside our heads but tries to open up enjoyment as something that is such a major part of our lives and how we think about the lives of others. The first domain we engage with in chapter 3 is perhaps the domain most obvious to those interested in the use of computers in enjoyment: games. We combine a look at computer games from a somewhat unusual direction with a study of deer hunting. In many ways computer games get much of their inspiration and format not from sports or from traditional board games, but from hunting, fighting, and warfare.

After we have covered our first empirical example, we will have a better idea of what sort of enterprise we are undertaking here. Starting from these examples gives us a chance to consider some of the unusual features of present-day leisure and enjoyment. In chapter 4, drawing on philosophy, economics, psychology, and the social sciences, we grapple with some of the history of discussions of enjoyment and the different historical approaches to understanding what pleasure is.

In chapter 5 we jump into one of the most important parts of enjoyment: its social nature. We describe the role of enjoyment in spending time with others, be it in exchanging short messages, in playing computer games together, or in searching for companionship or love in online forums. We mix our studies of the sociability of technology with our studies of prototype systems that support our social lives in new ways. In particular, we focus on the use of location awareness systems to support our social lives, bringing out some of the differences between the nature of family life and our social lives with friends and partners.

In chapter 6 we examine the role of travel and tourism in enjoyment—or, more broadly, the role of mobility in leisure. Perhaps one of the biggest commercial forms that enjoyment takes is that of tourism, described by some as the world's biggest employer. This chapter takes us through a study of tourism to see why it is an enjoyable experience, but also why it is that vacation trips are some of the most memorable experiences we have in our lives. To understand travel, it is important to understand the interplay between planning and more *ad hoc* arrangements; this leads to a discussion of the role of planning in leisure and enjoyment. After looking at tourism, we will describe the testing of some technical systems intended to support tourism in new ways. This will help to reveal some of the unnoticed aspects of mobile life.

In chapter 7, we consider the importance in our hedonic lives of television and music, which offer a more passive set of enjoyable experiences. We consider the relationship between relaxing and engaging with television and watching media more broadly.

In chapter 8 we draw together our theoretical and empirical arguments to engage with how we might design technology for enjoyment and to take a wider view of enjoyment as part of the broader society.

The empirical program of enjoyment is, at its heart, an attempt to establish the conceptual importance of enjoyment in how we analyze the social world. We wish to reestablish the importance of enjoyment in understanding why things are arranged as they are and why we make the choices we do. This means returning experiences to center stage and trying to consider seriously why it is that some activities are enjoyable and others are not. Building on this, we seek to understand how technology has become central to enjoyment and how we might use technology both to support enjoyment and to learn from it.