StanfordLawSchool

A NEWSLETTER OF THE STANFORD PROGRAM IN LAW, SCIENCE & TECHNOLOGY SPRING 2007

LST@Stanford

Dear Friends of the Stanford Program in Law, Science & Technology:

Welcome to the spring 2007 issue of LST@Stanford. For this edition of our newsletter, LST faculty member Prof. Paul Goldstein sat down with Stefania Fusco (JSM '05) to talk about his recent novel *Errors and Omissions* (Doubleday Publishing). This interview provides an interesting look into the author's mind and his inspiration to write a novel after having authored some of the most notable and influential IP scholarship.

This issue of LST@Stanford also features a fascinating interview by Lauren Weinstein (BA '05) with Jaime King, our 2006-07 Center for Law and the Biosciences fellow, who focused her fellowship research on the current ethical and legal challenges arising in the context of preimplantation genetic diagnosis. I am happy to report that Jamie has decided to continue her work at the Center through the 2007-08 academic year.

We would also like to welcome Harry Surden ('05), our inaugural CodeX (http://codex.stanford.edu) fellow, to the LST program. LST@Stanford conducted a brief interview with him for this issue.

Harry's work broadly focuses on the question of how legal rules can be represented in forms that computers can understand and reason with.

As this academic year draws to a close, I would like to congratulate our 5th LLM class in Law, Science and Technology on having mastered a rigorous course of study at Stanford Law School. Having had the privilege to work with these students, I know that they are well equipped to take on the most challenging problems a career in the law and technology field will hold for them.

Unfortunately, as the academic year concludes, we also see some valued colleagues leave Stanford. First, Jennifer Granick, the inaugural Executive Director of our Center for Internet and Society, is following her desire to be in the court room again and taking on the new position of Civil Liberties Director for the Electronic Frontier Foundation in San Francisco. Together with Larry Lessig, Jennifer has built CIS into the preeminent place for clinical work and intellectual discourse on civil liberties as they are challenged through the Internet. Simon Wakeman, Center for Law and the Biosciences fellow, David Levine and David Olson, both fellows with our Center for Internet Society, are also leaving to take on faculty positions at top universities. We wish them the best of luck with their next endeavors.

I would also like to alert you to the following two upcoming LST conferences: the International Conference on Artificial Intelligence and Law Symposium on June 4-8 (http://www.iaail.org/icail-2007/), and the Fourth Annual E-Commerce Best Practices Conferences on June 18, 2007 (http://lst.stanford.edu/best_practices).

The Program in Law, Science and Technology is aided greatly in its work by the annual support of our LST Venture Circle members (Cisco, Cornerstone, Google, Heller Ehrman, Intel, Ewing Marion Kaufmann Foundation, Oracle, Orrick Herrington & Sutcliffe, Qualcomm, and SAP) and our LST Program Partners and Associates (Cooley Godward Kronish, Fenwick & West, Genentech, Microsoft, Ropes & Gray, Skadden Arps, White & Case, WilmerHale, Wilson Sonsini Goodrich & Rosati, and O'Melveny & Meyers). Their generous support is instrumental in allowing LST to carry on its exciting work.

Please sign up for our mailing list at http://lst.stanford.edu. Thank you very much for supporting the Stanford Law School Program in Law, Science & Technology.

Very truly yours,

Roland Vogl,

Executive Director, Stanford Program in Law, Science & Technology

After writing a multi-volume treatise and numerous scholarly pieces about IP law, what gave you the impetus to write novel? What has Errors and Omissions been able to give you that the rest of your legal writing could not?

I have a great interest in narrative. During my first year of law school, I discovered that in reading cases I had a much greater interest in the stories and the characters than the law. Also, over time my writing became more narrative. Take for instance my book Copyright's Highway. In this book there is one chapter in which I discuss a photocopy case. I wrote this chapter in a very journalistic way and this form of writing gave me great pleasure. Moreover, this chapter has been a very successful one.

As for what Errors and Omissions has been able to give me that the rest of my legal writing could not, there are two elements. The first one is a matter of audience: novels allow me to reach a much wider range of people and to explain IP law – which today is so important – to a broader audience than just lawyers. IP law can be quite complicated and difficult for non-lawyers to understand. I am able to effectively solve this problem by discussing IP law in a narrative format. I can explain complicated legal concepts through the language and dynamics of fiction, and thus, engage those who do not deal with law for a living. The second element is on a more personal level, and it is the gratification that I receive from creating and developing a character.

At one point in your book, one of the characters says that his novels are "hard work, not like writing arguments or contracts or whatever it is (…) [that] lawyers do." Do you agree with him?

Oh yes, this sentence was meant to be a joke for lawyers. Kanarek is a very sarcastic character, but I do agree with him – writing legal arguments and contracts is easier than writing novels.

The reason is that there are different rules for writing fiction than, for instance, writing contracts and briefs. These latter rules are much more self-determinative. Instead, when you write a novel, at the end of every sentence you have options. You can go one way or the other, and the choice you make can compromise the entire story in a way that makes it not believable for the reader. I do not mean that these choices are made to win the reader's favor but rather they are made to create something that is consistent for him or her. Indeed, the whole book needs to be a real experience for the reader.

Professor Paul Goldstein

An Interview with Professor Goldstein

Error and Omission is Paul Goldstein's first novel. It represents an interesting mix of legal issues, business intrigues, historical facts and moral dilemmas. The book is a page- turner and introduces issues that both young and experienced IP lawyers might encounter at some point in their careers.

We invited Prof. Goldstein for an interview about his book.

How different from writing legal scholarly work is writing a novel? After all, don't they both involve sharing ideas with a particular audience and contributing to the current intellectual dialogue?

In these regards writing scholarly work or novels is the same. They are both an effort to communicate.

Errors and Omissions seems to include some elements of your own life – at least geographically speaking – Los Angeles, Munich and Buffalo. Was this choice of locations one of convenience, allowing you to write in more detail about places with which you are familiar, or is it instead something more?

It is a combination of things. Specifically, for the geographical places you mentioned, I decided to use areas with which I am really familiar to provide a real sense of place to the book's reader. It is a matter of being authentic.

At one point in the book Seeley, the protagonist, says that he would turn in his bar card if he couldn't tell which of his clients are right and which ones are wrong. Do you support his position? Do you believe that this determination is indeed possible and that lawyers unable to make it should dedicate themselves to another profession?

Seeley is an idealist. He wants to fight for "the right cause," repair "injustice" and protect "the poor and the oppressed." I do not think this determination is always possible. I disagree with him.

Cobb, an "old school" photographer, values authorship more than life. Reiman, the German lawyer, gets bitten up and risks his life again for his principles. Are these "foolish heroes" or are those acceptable, almost expected, behaviors given the circumstances?

I like both Cobb and Reiman. They are people able to do what, given the circumstances, is the right thing to do.

Now what's next? Will be there other novels? Will be there a sequel to this one?

I will keep writing novels. The next book's title will be Order of Proof. It will be about a patent case and take place in the San Francisco District Court, but for now, this is all I will say about it.

We interviewed Jaime King, a Stanford fellow in the Center for Law and the Biosciences, to hear her perspective on this new technology. Jaime's expertise is in the intersection of law, health policy, and medical technology. Following a discussion of her current research, Jaime shares with us an overview of PGD, its potential legal and social implications, and her hopes for the direction of future policy decisions surrounding this reproductive technology.

Jaime King, Stanford fellow in the Center for Law and the Biosciences

The Ethics and Policy of Preimplantation Genetic Diagnosis: An Interview with Jaime King

One of today's great legal challenges is keeping pace with rapidly evolving technology. Promising technology often evolves before sufficient oversight or legislation can be introduced to ensure its safety and prevent its abuse. In the field of biotechnology, Preimplantation Genetic Diagnosis (PGD) is an example of a technological innovation that has been quickly introduced but has yet to be regulated.

When did you first become interested in PGD?

I first became interested in PGD when I took Human and Molecular Genetics at Emory Medical School while studying to earn my JD at Emory Law School. Ever since then, I have been fascinated by the ethical, legal, and social issues associated with advances in reproductive genetics. Throughout my interdisciplinary PhD program in Health Policy at Harvard, I have taken a wide range of courses with an eye towards their relevance to genetics and policy. In the last few years, I have also reached outside the classroom to ART (assisted reproductive technology) clinicians, genetic counselors, psychiatric geneticists, and policymakers to explore the practical realities of PGD and PGD regulation.

What influenced your decision to come to Stanford to work on your research?

I attended a conference at the Center for Law and Biosciences on the Regulation of PGD in 2003. During that trip, I had the opportunity to meet Hank Greely and Roland Vogl. I was intrigued by the work they were doing at Stanford and the numerous connections they had made in the legal and scientific communities relating to PGD and reproductive genetics. In addition, I was excited to return to a law school environment after having been in an interdisciplinary program for the last four years. The Center for Law and Biosciences offered me the opportunity to work with national and international experts on my research and to be mentored by Hank Greely, which was by far the biggest selling point. In addition, Stanford also boasts the Center for Biomedical Ethics, the Center for Integration of Genetics and Ethics, and an excellent ART clinic, which are all resources that have been very beneficial to my research. One of the best things about conducting research at Stanford is the openness of the faculty, staff, and students from all across the University and their general interest in the work of others.

What does the LST program offer that other comparable programs do not?

The Law, Science & Technology program offers the opportunity to interact with a diverse set of scholars all interested in how the law interacts with technology and science but across a broad set of contexts. Under the LST umbrella, scholars are conducting research on technology patent litigation, the impact of the Internet on society, biotechnology licensing strategies, and ways that law can be integrated into computers and the Internet, just to name a few projects. I was extremely excited to contribute to this unique set of scholars and to find common themes among our work.

What is the focus of your current work?

Although my research topics relating to PGD have changed significantly over the last four years in order to keep up with the ever changing technological capabilities of the science, my current research focuses on the implications of the next leap forward in genetic testing capability, namely the use of microarrays to test for numerous genes and chromosomes at one time. My research examines current approaches in the U.S. and other countries to regulate PGD and analyzes them for their ability to address recent improvements in genetic testing capabilities. My work especially considers which policy approaches would be most appropriate for the U.S.

Can you provide us with a basic overview of PGD?

Preimplantation Genetic Diagnosis (PGD) is a form of assisted reproductive technology that enables parents to create multiple embryos outside the womb through in vitro fertilization (IVF) that can then be screened for chromosomal and genetic abnormalities. PGD can be used to either verify that all 23 pairs of chromosomes are present and all chromosomal structures are intact or to determine whether genes associated with certain genetic disorders or *(continued on pg. 4)*

Jaime King

(continued from pg. 3)

characteristics are present in a particular embryo. As a result, PGD enables parents to select embryos that will have the best chance at becoming a healthy child for transfer into the uterus.

Who are the primary beneficiaries of PGD? What are the problems PGD attempts to address?

Currently, PGD is most commonly used to aid couples suffering from infertility. PGD allows individuals who have had multiple miscarriages, potentially due to problems with chromosomal structure, to identify which embryos are unlikely to implant or survive the pregnancy. By only selecting embryos with normal chromosomes for transfer to the uterus, PGD has the potential to improve the efficiency of IVF. IVF is very expensive, averaging around $10,000 per cycle, and families often have to go through multiple cycles before they succeed in having a child. The process is aimed at increasing a mother's chances of giving birth to a healthy child on the first attempt.

Couples with a family history of a serious chromosomal or genetic disorder also use PGD in order to screen out embryos that have the mutation associated with the hereditary disease. Historically, pre-natal testing during the second trimester has been used to identify fetuses with serious genetic or chromosomal disorders, leaving parents with the decision of whether to abort or carry the baby to term. PGD allows parents to know ahead of time which embryos will carry the disorder so that they will not be faced with the difficult decision of whether to terminate the pregnancy. Examples of disorders that can be screened for include: Down Syndrome, cystic fibrosis, Tay Sachs, Fanconi's anemia, and X-linked disorders, such as hemophilia and Duchenne's muscular dystrophy.

In addition to these initial uses, parents have begun to use PGD to select against genes that confer a predisposition to disease, such as BRCA1, which confers a heightened risk of breast cancer, and APOE, which increases the risk of early onset Alzheimer's. Likewise, some couples have used PGD to select for non-medical traits such as sex or a bone marrow/organ donor match for an ill sibling. These uses have been more controversial, but all of them are legal in the United States.

What has been the resistance to PGD?

First of all, PGD is very expensive. It adds about $4000-5000 to the cost of IVF, and it is not covered by insurance so families need to pay out of pocket. As a result, a large portion of the population will not have access to PGD. Many people are concerned that if the wealthy have greater access, this will further exacerbate health disparities between the upper and lower classes.

There have also been various moral objections to PGD. Some objections have come from people who are pro-life and therefore disapprove of the process because some embryos will be discarded. Others object to PGD because they believe that using it to select embryos based on their genetic traits is akin to playing God. There has also been significant criticism from the disability community who oppose using PGD to screen for disorders with which a child can live – like blindness, deafness, or Down syndrome. They believe that screening out these embryos sends the message that individuals with these conditions don't have the right to live or are less valued. Each of these concerns demonstrates the potential impact that PGD can have on society and should be considered by policymakers in determining whether and how to regulate PGD.

In general, most people tend to approve of the use of PGD for infertility and serious genetic disorders. They can understand wanting to have a healthy child. In many ways, IVF and PGD have escaped the controversy to which stem cell research has been subjected because the purpose of IVF and PGD is to implant embryos and create life rather than conduct research. Since PGD occurs in a clinical setting, there also isn't the need for federal research funding – individuals make the decision with their physician, they pay for the procedure out of pocket, and the decision is for the purpose of reproduction. More controversy over PGD is likely if embryos begin to be discarded based on factors not related to serious disorders.

The greater part of the controversy is based on the potential horizon: selection based on non-medical traits, families in the deaf community that want a deaf child, parents that want to select HLA matches (i.e. donor matches) for siblings, etc. There is an even finer line. What about genetic testing for disorders like Huntington's or Alzheimer's that will only occur later in life after someone has lived a majority of healthy years? Or genetic testing and screening for predispositions such as a likelihood of breast cancer? These issues tend to be more controversial. Gender selection has also been very controversial and has been banned in most countries where PGD is available. Undoubtedly, as our knowledge of genetics and genomics progresses, more parents will want to select for more things, and it will become more difficult to decide what's acceptable and what's not.

How does PGD play into evolving legal areas like biotechnology law?

PGD demonstrates the ever-present challenge of keeping up with the rapid advances in science by creating laws that are flexible enough to remain applicable over time. Our legal system was designed to resist change, which makes it difficult to create and modify laws fast enough to appropriately evolve with emerging technology. As a result, legislators have been reluctant to pass regulations over some new biotechnologies.

PGD is a prime example of a medical procedure that the government has not sought to regulate. We have already begun to see the dangers of not carefully monitoring PGD clinics and tests. Currently, you need a license to cut hair in this country but not to remove a cell from an embryo for genetic testing. There is a strong need for regulation to ensure that the people conducting assisted reproduction procedures are adequately trained, that the clinics are safe, and that the genetic tests are reliable and accurate.

How can the law keep up with changes in science and allow technology to sufficiently progress while at the same time protecting individuals and assessing ethical concerns regarding the use of technology?

With respect to regulating for which genes parents may screen their embryos, the major issue is one of balance. People have disparate opinions about reproductive technology and biotechnology. Many people feel that they should have the right to do what they want with their bodies, including choosing when and if they have children. Others believe that there should be limits to parental autonomy in reproductive decision-making. These challenges will only become more difficult now that *(continued on pg. 5)*

Jaime King

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reproductive technology can provide parents with previously unconsidered choices that will only become more numerous as technology progresses. With PGD, lawmakers will have to consider the status of a preimplanation embryo and what limits, if any, should be placed upon parents in testing and selecting embryos.

One policy question will be to what extent the Constitution will protect these choices. Advances in reproductive technology are likely to raise issues in constitutional law, administrative law, and health regulations and laws. As a result, we may need to re-examine older statutes and case law precedents.

What are the current laws concerning PGD? What changes would you like to see?

Basically, there are no regulations in the U.S. regarding what types of tests people can engage in, who can provide these tests, and who can undergo them. Currently, clinics that perform IVF are required to report information on the success rates of IVF cycles, but little other regulation over assisted reproduction exists.

First and foremost, the U.S. should establish regulations pertaining to proper laboratory procedures that specify in what settings PGD can be done and who can perform it. Such regulation should also have clear guidelines concerning genetic counseling and informed consent before families undergo PGD. Patients should be made aware of the potential risks of IVF and PGD, including the side effects of the necessary hormone injections and the potential for multiple births. In addition, they should be notified of the accuracy of the genetic tests and the penetrance (the probability that the presence of a gene will result in a specific physical characteristic) of the genes they are attempting to screen out.

I would also like to see some thought given to whether restrictions should be placed on certain kinds of genetic tests for PGD purposes. This will entail re-examining the Constitutionally-protected reproductive rights granted to parents to determine how far these privileges should extend. There is also room for analyzing the appropriate role of the government in general technology regulation. We will need to decide how much regulation of new technology is appropriate and how we should go about gathering sufficient information to select a policy option.

The major question will be how much government oversight of PGD is warranted when the technology touches certain aspects of intimate human relationships and human life. Currently, the Due Process Clause of the 14th Amendment protects a parent's right to make intimate decisions regarding whether to have a child. PGD offers the additional choice of which child to have. Whether due process protection extends to certain kinds of embryo selection remains an open question.

What do you think might come up in future case law?

Currently, cases involving PGD arise from malpractice claims for errors in embryo selection. For instance, one couple recently sued after giving birth to a male affected with a serious genetic disorder when, according to the PGD clinic, only unaffected female embryos had been transferred. These cases arise from errors either within the laboratory by mixing up embryos or in the genetic testing lab from sample errors. They demonstrate that assisted reproduction clinic and genetic testing oversight is not what it should be. Clinic and laboratory regulations and best practices guidelines are strongly needed.

If legislation is passed that restricts PGD testing for certain traits, parents might challenge these restrictions as infringing upon a fundamental right. As technology progresses, parents might sue to enforce their right to screen for any trait. Drawing lines between appropriate and inappropriate uses of PGD is likely to prove very difficult. If the U.S. were to follow many European countries and only allow for the screening of serious genetic disorders or impairments, it is unclear whether this should include screening for genetic predispositions, such as those for certain types of cancer, allergies, Alzheimer's, and heart disease. As our knowledge of genetics improves, fewer and fewer hereditary characteristics will result from the contribution of a single gene. Most conditions result from multi-gene interactions and gene-environment interactions, creating predispositions and probabilities of having disorders, not definitive diagnoses. Given the probabilistic nature of much of genetic testing and the range of seriousness of conditions from life threatening to cosmetic, drawing clear regulatory lines regarding what choices are permissible will prove very challenging for the law.

However, unlimited use of PGD may adversely impact society. It threatens to increase health and opportunity disparities between socioeconomic groups, increase stigma and discrimination of certain disabilities, and it has the potential to devalue the lives of individuals living with traits selected against. As parents turn to IVF and PGD more frequently, we will begin to see the procedure's impact on society. As use increases, it will be important to monitor PGD to determine if society will be adversely impacted.

The future of PGD is undoubtedly appealing. Parents will have the ability to improve the chances that their children will be healthy and have a broad range of opportunities. The benefits of PGD would also extend beyond one generation. However, obtaining these benefits could have negative outcomes for society. As a result, we should pursue advances in PGD in a manner of cautious optimism, in which we permit the technology to be used freely, but are prepared to respond quickly if potentially dangerous trends develop.

What are the policy decisions that could affect current and future applications of PGD?

From a policy standpoint, it is very important that legislators think carefully about what the technology is capable of and what goals we hope to obtain through its use. PGD regulation should enable prospective parents to access the benefits of genetic selection while attenuating the potential for societal harm. It is important that the U.S. prepare for challenges before they arise rather than try to retroactively legislate problematic uses.

As mentioned earlier, a big issue politically will be the balance between parental autonomy and government regulatory interest. Women may currently have abortions for any purpose. If a woman can abort a 10-week fetus for any reason, it begs the question why parents cannot discard an embryo for any reason. For many, this ends the debate. While it is easy to get bogged down in the abortion politics associated with PGD and other assisted reproductive technologies, it is important to see the bigger issues at stake.

We are in a position for the first time to select a variety of genetic *(continued on pg. 8)*

Harry Surden is the inaugural fellow for the Stanford Center for Computers and the Law (CodeX). Harry graduated in 2005 with honors from Stanford Law School, where he worked as a research assistant for Professor Lawrence Lessig. He comes to the fellowship after a 2005-06 clerkship with the Honorable Martin J. Jenkins of the United States District Court in San Francisco. Harry brings professional computer science experience to the fellowship post. Prior to law school, Harry worked as a software engineer for both Cisco Systems and Bloomberg L.P. He received his undergraduate degree with honors from Cornell University. We invited Harry for a short interview to find out more about his motivations to undertake certain projects and about his general interests.

Harry, what made you decide to return to Stanford for your post-graduate fellowship?

Stanford was very attractive to me because of its unique reputation for strongly supporting creative cross-disciplinary research. I came to Stanford for law school with a background in software engineering and political science. My law school experience was strongly influenced by my computer science background. In particular, I noticed that some legal problems that were presented in class were analogous to problems that I had seen in computer science, and which had been well studied and solved in that domain. The professors at Stanford Law School and other departments were very supportive of this type of work during law school, and I even had the opportunity to present some of my ideas to faculty in the computer science department. When Stanford created the Stanford Center for Computers and Law, the interdisciplinary collaboration between the law school and the engineering school, it affirmed Stanford's institutional willingness to pursue new research paths. Because of this and the research opportunities presented, I was motivated to return to Stanford as a post-graduate fellow.

Harry Surden, Inaugural Fellow, CodeX

An Interview with Harry Surden

Inaugural fellow for the Stanford Center for Computers and the Law (CodeX).

On which CodeX project are you focusing at the moment?

I am working on a project that is studying ways to represent laws in forms that computers can understand and reason with. For example, we are studying the degree to which certain building code rules might be represented in computable form. In that way, architects could potentially test their building designs for compliance with certain laws at the design stage. Issues of law and computation are becoming more and more relevant as legal rules are increasingly becoming embedded in computer code. However, it is clear that some areas of the law are more amenable to representation on computers than others. For example, tax-preparation software such as Turbotax is a great example of a system in which law is usefully represented in computer understandable form. Part of the project is coming up with principles for distinguishing those areas of the law that are amenable to computer representation and analysis from those that are not.

Has the Law, Science, and Technology program been helpful in conducting your research?

The Law, Science, and Technology program has been particularly helpful in the work that we are doing at the Center. Roland Vogl has been instrumental in several of the center's projects, and LST has directly supported much of our research. In addition, we have been able to work closely with our peers under LST, especially those at the Center for Internet and Society (CIS). Our work strongly complements the work conducted at CIS. I like to say that CIS is engaged in the law of technology, and we at Codex are engaged in the technology of law.

What are your plans for the future and how does the work you are presently doing at Stanford fit them?

I have a strong interest in technology and law issues, especially in intellectual property law and in the topics that I am currently studying. My plans for the future are still uncertain, but it would be great to someday find a job, such as an academic position, where I could combine these interests.

On the more personal side, what are your interests "beyond CodeX"?

I have lived abroad twice, once in Paris and once in Buenos Aires. I found these to be two of the greatest and most influential experiences that I have had. For me, living for an extended period in another culture, in addition to being exciting and novel, provides a unique opportunity for reflection on one's own culture. Plus, immersion proved to be a great way to learn new languages. When having food and shelter depends on learning a new language, suddenly one has a pretty strong motivation to learn.

The Stanford Law School Talk on the European Antitrust Case against Microsoft and its Significance for Silicon Valley Companies

On March 6, 2007 the Stanford Program in Law, Science & Technology co-sponsored with White & Case LLP and the Transatlantic Technology Law Forum a talk on the European Antitrust Case against Microsoft. The purpose of the event was to address the implications that the (at the time) about to be rendered decision of the European Union might have on Silicon Valley companies.

The EU antitrust investigation of Microsoft began in 1999 and culminated in 2004 with the landmark antitrust ruling that fined the software giant $613 million. The ruling was attributed to Microsoft's failure to provide its competitors with the information they needed to participate fairly in the server software market as well as the company's illegitimate bundling of Media Player with Windows. As a consequence, Microsoft was given 120 days to provide the necessary information to its competitors and 90 days to offer a version of Windows without Media Player. In July 2006, the American software company was further fined $357 millions for non-compliance with the 2004 ruling and on March 22, 2007, the European Commission reported that Microsoft continues to use "abusive" business practice that substantially increases its dominance in the server market and stifles competition.

During the event at the Law School, a panel of attorneys, economists, and academics had an open discussion and offered a thoughtful analysis of the past and present antitrust charges that Microsoft has had to face both in the U.S. and Europe. This group of experts also speculated on how the European decision against Microsoft would influence the business practice of Silicon Valley Companies, specifically the way they license and bundle their technology.

The panel which was moderated by Prof. Mark Lemley, featured Prof. Tim Bresnahan, Chair of the Economic Department at Stanford University; Tom Burt, Corporate Vice President and Deputy General Counsel of Microsoft Corporation; Ian Forrester, appellate co-counsel for Microsoft Corporation before the European Courts in Luxembourg; Dr. Matthew Lynde, Vice President of Cornerstone Research; and R. Hewitt Pate, former head of the Antitrust Division of the United States Department of Justice and partner of Hunton and Williams. For an audio-capture of the event please visit our event archive at http://lst.stanford.edu.

Calendar of LST Events

June

4-8 Mon.-Fri.
International Conference on Artificial Intelligence and Law Symposium (ICAIL), sponsored by Stanford Program in Law, Science & Technology

18 Mon.
Fourth Annual E-Commerce Best Practices Conference, sponsored by Stanford Program in Law, Science & Technology

For more information, write to public.interest@law.stanford.edu or call (650) 723-2519.

Jaime King

(continued from pg. 5)

traits for our offspring. Our capacity to do so is only going to increase. As a society, it is very important for us to consider how we want this technology to be used. In order to determine the societal risks, we must understand what the demand for certain genetic tests are. In addition, we must ensure that the procedure is safe for the children born via the procedure. Little of this has to do with abortion politics.

In order to make informed decisions about whether the U.S. should regulate PGD, I favor the creation of an administrative body that licenses and monitors all ART clinics and gathers information about how the technology is being used. In addition, it should assess the current and potential demand for PGD services. This federal agency should also monitor whether PGD causes harm either to the children born via the procedure or to society as a whole. This information will provide insight into whether there is a role for government regulation over the practice over and above the clinical regulations currently necessary.

Under this regulatory approach, each clinic that proves it is up to pre-determined standards and codes should receive a license. If a clinic fails to follow the federally mandated regulations or guidelines, it will have its license revoked. Clinics should be required to provide quarterly reports stating how many PGD cycles it performed, how many embryos it created, how many embryos were screened, what the embryos were screened for, which embryos were transferred, what the implantation and live birth rate was, and the long term health status of the children born via the procedure. I think the best way to do this is through agency regulation. A regulatory body can gather and analyze this information to assess the use of PGD for both harm to the offspring and harm to society. Agencies work much faster than the legislative process and can also act more independently without being unduly influenced by party lines or politics. In the case that certain uses are inappropriate, an agency already steeped in the process can pass regulations more quickly than any other entity. We can start with a regulatory body, and then if there is the need for more serious regulation, legislation can be passed.

Any closing thoughts?

Genetic testing is not well monitored. IVF is not well monitored. As a result, PGD, the combination of IVF and genetic testing, is not well monitored. I think it is important that we start thinking now about how we want to regulate it before it becomes more ingrained in our culture and difficult to do so.

Regulatory and oversight entities need to think about and evaluate the potential individual and societal impact that PGD may have in the future so that they will be able to pass regulations in a faster, more efficient way than is currently possible.

Technology is consistently changing. While there are a lot of benefits and the potential for significant societal changes, there are also the negatives of which we should be aware and prepared to address.

About *LST@Stanford*

LST@Stanford is produced by the staff of the Stanford Program in Law, Science & Technology.

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For audio and video captures of previous LST events please visit our past events section on our website at http://lst.stanford.edu or the Center for Internet and Society website at http://cyberlaw.stanford.edu