

NU HOU KANAWAI

A NEWSLETTER OF ISSUES, TRENDS AND RESEARCH FINDINGS

LAW AND TECHNOLOGY:

Universal Law

"Legal Vacuum"
Mark Ziemann
Wall Street Journal
August 20, 1985

Summary:

Throughout history, the opening of new territories has been followed by a tenuous period in which norms of law become established. The exploration and settlement of the New World provides a clear example of the many conflicts and uncertainties which arise when nations compete for influence and dominance without any rules enjoining certain types of behavior. This article is concerned that space presently is a legal void, lacking any coherent laws and is open to a variety of international disputes.

Ziemann notes that as the U.S. starts its commercial thrust into outer space, astronauts and space entrepreneurs are moving into a legal wasteland, where liability, national sovereignty, commercial codes, criminal laws and government regulations are veritable black holes. With national governments and private industries reaching into space, "space industries are expected to generate 10 million jobs and 65 billion or more in revenue by the year 2010," the issue of law becomes critical.

Space law is necessary in order to establish international regulation over space pollution, orbiting rights, and private development. However, the regulation of these matters can, to a large

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Picture Perfect

"Digital Retouching"
Stewart Brand, Kevin Kelly
and Jay Kinney
Whole Earth Review
July 1985

Summary:

Are photographs reliable as evidence, accurately depicting a moment in time? The authors of this article contend that this may no longer be so. By using a high-tech process involving laser technology, a picture now can be turned into digital data, rearranged and reprinted.

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Digital retouching systems, such as Scitex, are used throughout the world to speed-up and enhance the quality of photographic reproduction. Several publications, including **Time**, **National Geographic** and **USA Today**, use

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Hi-Tech Drugs

"Losing War Against Designer Drugs"
Roger Schulman and Margaret Sabine
Business Week/June 24, 1985

Summary:

Designer drugs are slight variations, in chemical structure, of illicit drugs. By changing the molecular structure, the new compound is no longer restricted but maintains the same desired effect. Until each new variation of the illicit drug is banned by the DEA, the drug is legal to make, sell and use.

Such synthetic drugs are increasing in growth because, "they are cheap to make, require no poppy fields in Turkey or midnight runs from Columbia, just the right lab equipment, a shoebox full of chemicals and a highly trained pharmacologist." For little risk and cost, a small lab can create thousands of doses and reap enormous profits.

The development of the drug China White provides a history of a synthetic drug. In 1968 fentanyl, a pain killer 100 times as potent as morphine, was invented for use in operating rooms. In 1979 a synthetic form of this drug, China White, appeared on California streets. This compound varied only slightly from the original and was twice as potent. In 1981 the DEA banned the drug. That same year, Persian White, a new synthetic differing by one atom appeared. In March 1985 the DEA banned the 10th version of fentanyl, a derivative 30 times more powerful than the original drug. *Continued on Page 2*

Computers With Biochemical Senses

"Chips that See, Smell, and Feel"

Emily T. Smith
Business Week
May 13, 1985

Summary:

A new generation of sophisticated devices are giving machines humanlike abilities such as smell, touch, and sight. These so-called "smart" sensors are seen as the cutting-edge of a revolution in manufacturing, medicine, and defense, and one critical to developing truly intelligent machines. What sets the new generation apart is its ability to combine a computer chip with a sensor in one device. Instead of merely measuring data, these new sensors-on-a-chip **interpret the information and make decisions** on it. In addition, the computing power built into today's new sensors gives them the ability to perform more than one task at a time.

Unlike bio-technology, where profits may still be years away, researchers believe that the new sensors will very quickly carve out a major market. For example, by 1995 doctors' offices will have a sensor that can measure 35 blood components—virtually all the ones that are clinically important. In addition, it could be used in dentistry for oral sensing and in robotics.

Just how far can the new sensors go? While specialists are convinced that smart sensors will soon routinely perform a broad range of tasks, from monitoring pollutants in water supplies to shutting household windows when it starts to rain—what happens next is anybody's guess. But already researchers are talking seriously about implanting sensors that continually monitor human health and robots with senses that rival human beings.

Comments:

What happens next may involve the courts; for example, questions of implanted sensors used for social control.

And robots with senses that equal human beings, combined with advances in artificial intelligence, bring us steadily closer to the likelihood of the courts facing the question of the "rights" of robots.

See: Michael Lemonick, "Machines With Living Parts," **Science Digest**, February 1984, and Paul Pietsch, "The Mind of a Microbe," **Science Digest**, October 1983. ■

PICTURE PERFECT

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such systems to crop photos and to enhance color and contrast. These publications claim they do not doctor the photographs they use, but as Kevin Kelly notes, "what the magazine who routinely uses these creative retouching machines are saying is trust us."

The Confucian proverb "a picture is worth a thousand words," is off eight hundred-fold when it comes to a photograph—one 8" by 10" photo will occupy the computer memory space of eight million words. When a photograph is turned into digital data, images can be moved, replaced and altered with such expertise that it becomes almost impossible to detect how it has been retouched. In the opinion of Stewart Brand, "the commonest and profoundest technique of digital retouching is cloning"—taking part of an image and erasing another part with it—"you are adding redundancy to the picture, reducing its total information and introducing disinformation."

Comments:

As increasing amounts of information become stored in computers, the opportunity to create illusions with that data also increases. Records, photographs, personal files can be quickly altered by computers, thereby greatly distorting reality or even creating a new reality. This ability to manipulate data can greatly impact who we are and how and what we believe. The judicial system which relies upon the presentation of facts will have to consider the growing problems of high-tech deception. ■

UNIVERSAL LAW *from Page 1*

extent, be done on Earth. Taking the judicial process into space is another crucial matter. The confining nature of space craft and space stations is likely to exacerbate the potential for conflict. The cumbersome structure of our legal system will be impractical for a space station. It is anticipated that future cosmic counselors will instead follow the example of Italian consuls of the 10th century who shipped out on long voyages to arbitrate crew disputes. The article notes, "lawyers follow money and power and both are already in space."

Comment:

Life for those who live and work in space will be very different from that of Earth. Explorers tend to be daring impetuous types who are difficult to control but willing to endure any hardships to reach their goal. Also, the transformation that the space experience creates in the individual, as with our lunar astronauts, may create a great schism between the inhabitants of space and Earth.

See Arthur Danto, "The Republic of Space," **Space World**, June 1985. ■

HI-TECH DRUGS *from Page 1*

The designers of fentanyl derivatives have, so far, avoided apprehension. Experts theorize that the drugs may be the work of one brilliant pharmacologist. According to Robert Robertson, chief director of drug programs in California, "we are talking about a state-of-the-art operation here and a world-class chemist is probably behind it."

Because designer drugs can be developed very rapidly, they are difficult to restrict. Speeding up the process of placing synthetic drugs on a controlled substance list is one method presently being employed by state and federal government. In Florida a hazardous drug can be placed on a controlled substance list in as little as 24 hours. Another option which Congress is studying would provide harsh penalties for those who create analogs of controlled drugs with the intention of distributing them illegally. ■

LAW AND TECHNOLOGY:

Men and Machines

"Death By Robot"
Science Digest
August 1985

Summary:

The **Morbidity and Mortality Weekly Report** cites the first case ever of death by robot. The accident occurred when a machinist at a Michigan company entered the robots "work envelope." Apparently not programmed to take human frailty into account, the robot used its arm to pin the man to a safety pole, killing him with the force.

Comment:

This accident is an apparent violation of The First Law of Robotics as provided by Isaac Asimov which states, "A robot may not injure another human being." However, before such a statement can become reality, technology must be able to provide more advanced programming and skills, such as vision, for robots.

An article in the August 1985 **Futurist** titled, "Robots with Vision, Humans with Bar Codes," illustrates a way to avoid death by robots. To prevent injury, human workers may wear clothes with a bar-coded pattern that robots can recognize as meaning, "stop! a human is around."

During this explosive era of high tech development, contact between machines with artificial intelligence and humans is rapidly increasing. Computer intelligent devices are now found making decisions for people in all areas: the home, schools, business, industry, and government. This growing interrelationship between humans and thinking machines will undoubtedly result in accidents, injuries, assaults and misunderstandings of an entirely new nature. In the future, rights, responsibilities, and protection for individuals, employers, and thinking machines will require new legal definitions. ■

Someone May Be Watching

"The Surveillance Society"
Gary Marx
The Futurist
June 1985

Summary:

The impression that people are always being watched—by police agents, store detectives peering through one-way mirrors, surveillance cameras, etc.—is one way to deter illegal action. The author of this article, Gary Marx, points out that this method of surveillance coupled with the mystique of high technology can create an impression of police omnipresence and omnipotence.

Undercover or "sting" operations have become an important aspect of FBI investigations. For the period 1977-1983, the FBI budget for undercover activities rose from \$1 million to \$10.7 million. While effective in catching criminals, this method of investigation can circumvent many civil liberties. Marx states, "no warrant is required for setting up a fake organization, for infiltrating a group or for tempting illegal opportunity."

Another means of surveillance is the use of informants. Some anonymous informant programs, such as Turn-In-a-Pusher (TIP) and Crime-Stoppers, have been effective and popular. But, the author notes that by institutionalizing such a system, we may be encouraging paranoia, suspiciousness and vigilantism.

Recent high-tech developments have greatly increased the effectiveness of surveillance and data collection. Among these new devices are: heat sensor and tracking devices, voice analyzers, and electronic drug "sniffers". The capabilities of modern computers encourage the creation and retention of personal data that would not have been collected or saved in the past. From bank transactions to cable viewing habits, previously unconnected surveillance

Information Security

"Encryption Boom Foreseen"
The Futurist
June 1985

Summary:

The increasing use of computers and telecommunications technology to transmit or store information will lead to a quadrupling of sales of data, text, and voice encryption equipment in the U.S. by the year 1990. The key buyers which are generating this demand are: the National Security Agency; the U.S. Treasury; computer users and software manufacturers; and the expansion of traditional markets.

Under the Reagan administration the government has become increasingly concerned with protecting sensitive information. Responding to the threat of espionage, the NSA is encouraging all government agencies and defense contractors to install voice encryption equipment on their telephone lines. The U.S. Treasury has also responded to this problem by requiring all organizations using electronic funds transfer of government money to use Treasury certified encryption equipment.

Encryption equipment is also seen as becoming invaluable to private business. According to the president of International Resource Development Inc., Kenneth Bosomworth, "with billion dollar strategic plans lying around on desks, in the form of floppy disks, corporate micro computer communications are shockingly lax."

Comments:

The judicial system, like most other agencies of government, is rapidly computerizing. Once court records are placed on computer data files, they may become vulnerable to criminal hackers seeking to alter or delete incriminating data. Providing adequate security for confidential court records is an important issue in the information age of computers. ■

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LAW:

Judging Predictions

"Bad Forecast Costly"
Honolulu Advertiser
August 13, 1985

Summary:

A U.S. District Judge in Boston has ordered the federal government to pay \$1.25 million to the families of three lobstermen lost at sea during a storm that the National Weather Service failed to predict accurately.

The ruling on damages by Judge Joseph Tauro came eight months after he held the weather service and the National Oceanic and Atmospheric Administration liable for failing to repair a wind sensor atop a weather buoy 100 miles at sea.

The ruling recognized a duty by NWS owed not to the general public to accurately forecasts the weather, but to an identifiable group of professional mariners who place particular reliance on special forecasts.

The National Weather Service is appealing the decision, taking the stand that the government should not be responsible for incorrect forecast of the weather.

Comments:

As new methodologies and application of technology enhance our ability to predict and as society's expectations of accurate predictions rise, suits of this type will increasingly reach the courts. In a recent lawsuit against Union Carbide, one of the charges centered on the failure of the company's new warning system stating, "The defendants negligently failed to program Union Carbide's new warning system so that it could predict the movement of the cloud of aldicarb oxime gas."

See: "22 Sue Union Carbide Over Leak," *Honolulu Advertiser*, August 21, 1985; Otis Pike, "Weather Forecast Lawsuit," *Honolulu Star-Bulletin*, August 23, 1985; and "When Lawsuits Target Rich Uncle," *U.S. News & World Report*, August 26, 1985. ■

Corporate Accountability

"How To Take A Bite Out of Corporate Crime"
Stan Crock
Business Week
July 15, 1985

Summary:

Assessing responsibility for corporate actions has been in the past almost impossible. Recently, there has been a renewed interest by government and the courts to push through the anonymous barrier of the corporation and hold corporate board members and management accountable for company actions. According to Robert Ogren of the Justice Department Criminal Fraud Unit, "price-fixing, consumer and defense-procurement fraud and similar crimes may cost the public hundreds of billions of dollars."

Legal rules usually require guilty knowledge—intent—concerning criminal activity in order to impose punishment on an individual. Top management has traditionally defended themselves with a shield of deniability of and knowledge of incriminating information. However, in a study of retired middle managers, 72% said that upper management knew about improper conduct while it was going on or soon afterwards. New evidence also suggests that George Ball, former CEO of E.F. Hutton, may have known about the company's overdraft procedures. The disturbing regularity with which corporate leaders avoid responsibility suggests that it may be the time to consider novel solutions.

Some solutions to deal with the problem of corporate crime offered by the author are:

- (1) bar convicted corporate breakers from working in public companies;
- (2) impose meaningful fines and or transfer company stock to a victims' compensation fund; and
- (3) require corporate community service where vast company resources can be utilized to undo misdeeds.

Still, according to Harvard Business Professor John Matthews, "the best way to get managements attention is to punish management directly." The most recent example of direct corporate punishment resulted in murder convictions of three officers of Film Recovery Systems, Inc. Unsafe working conditions of the plant, acknowledged by management, resulted in cyanide poisoning of an employee. The 25-year sentences of the company president, plant supervisor and foreman, have sent shock waves through executive suites everywhere.

Comments:

Accountability for corporate activities extends beyond health and safety hazards. Last January the Delaware Supreme Court sided with shareholders and ruled that the directors of Trans Union Corp. were grossly negligent in approving a company merger. According to the court, the directors should be held personally responsible for their actions. This means each director could be liable for millions of dollars in damages.

These recent rulings signal an end to the old approach of corporate independence, anonymous from responsibility to shareholders and citizens. **This may also begin a dramatic rise to the trend of corporate litigation.**

See: Vicky Cahan, et.al., "A Murder Verdict Jolts Business," *Business Week*, July 1, 1985; William Blaberson and William Powell, "A Landmark Ruling That Puts Board Members in Peril," *Business Week*, March 18, 1985; "Negligence Suit," *NHK*, Vol. II, No. 1, 1985. ■

SOMEONE WATCHING

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threads can now be woven into gigantic tapestries of information.

In a surveillance society, individual liberty and privacy become more and more difficult to protect from manipulation and coercion. Marx states that "with modern surveillance techniques, inefficiency is losing its role as the unplanned protector of liberty." ■

Learning Through Tragedy

"The Inhuman Error: Lessons From Bhopal"
S. Prakash Sethi
New Management
Summer 1985

Summary:

The Bhopal accident was not a natural disaster: it could have been foreseen and, therefore, prevented. The criterion then for assessing responsibility should rest on what the management of Union Carbide should have known. The author points out that, if the tragedy of Bhopal is to provide any lessons, two critical issues must be addressed: (1) prevention of such accidents; (2) life-time compensation for victims.

In order to prevent the reoccurrence of a Bhopal type disaster, a number of steps may be taken. First, redundant backup safety measures should be instituted to minimize potential hazards and to make the plant as idiot proof as possible. Secondly, the cost of industrial hazards should be internalized. When costs are internalized, industrial actions may risk the financial life of a corporation. The risk of high costs should then lead to more prudent decision-making by multinational corporations (MNC) on plant location and management. Thirdly, corporations must assume the role of self-regulation. International regulations have not worked on the critical global issues of war and peace and are less likely to work in areas with relatively low priority.

At issue in deciding victims compensation is deciding where the case will be adjudicated and how compensation will be distributed. One cannot assume that the judicial system of a particular MNC's home country is always more efficient or fairer than that of a host country. Sethi suggests that an appropriate alternative would be for the World Court to appoint a judicial master who would hear all testimony and define levels of compensation. Utilization of the weight of international public opinion →

Chemical Society

"MDMA: Psychedelic Drug Faces Regulation"
Jack Shafer
Psychology Today
May 1985

Summary:

MDMA, a psychedelic drug known as Adam or Ecstasy, has touched off a legal battle between the federal government which wants to ban the drug and clinicians who think the time has come to reinvestigate the therapeutic use of psychedelics. Taken orally, this drug intensifies emotional feeling without the sensory distortion associated with LSD.

Called the Yuppie psychedelic, MDMA, is becoming one of the most sought after drugs on the black market.

Users speak of increased perceptions of self-insight, empathy and aesthetic awareness.

As an adjunct to psychotherapy, psychiatrists such as Claudio Naranjo, feel that "MDMA reduces natural defenses

→ will be important in gaining acceptance of any decision.

After the decision is made, appropriate administration of compensation is of critical importance. In most underdeveloped countries accident victims are likely to be poor, uneducated, and uninformed. Although most victims lack the sophistication and means to manage large sums of money, Sethi feels that the administration of compensation should not be left solely in the hands of bureaucratic government agencies of the less-developed countries (LCD). Sethi concludes that in order to ensure that victims are properly cared for, the MNC's being fined as well as such agencies as the International Red Cross should be involved in the process of compensation. ■

and opens the user to trusting relationships." Because of this therapeutic value, physicians and other medical professionals prefer that the drug be placed lower on drug schedules, restricting recreational use but not medical use.

Called the Yuppie psychedelic, MDMA, is becoming one of the most sought after drugs on the black market. For this reason, the federal Drug Enforcement Administration (DEA) feels that the drug has a high potential for abuse and has recommended that it be placed in Schedule 1 of the drug laws along with heroin and LSD. (Since the publication of this article, MDMA has been placed on Schedule 1 by the DEA with penalties for production and distribution of 15 years in prison and \$125,000 in fines.)

Shafer concludes that restrictions may eliminate psychedelic drug research but will not completely solve the problem. Drugs such as MDMA are easily and inexpensively synthesized. A new and still legal analogue of MDMA has already turned up—MED. Its nickname is Eve.

Comments:

Synthetic drugs pose many problems for drug enforcement. The structure of these drugs can be easily and rapidly altered while maintaining the same effect. The question which may face the legislature is whether or not to outlaw the effect rather than the composition of the drug itself. The popularity of MDMA signals a growing trend of hallucinogenic drug use—magic mushrooms, LSD, and mescaline—among teenagers.

See also: Jeff Meer, "Drug Abuse A Mushrooming Problem," *Psychology Today*, May 1985, and "Psychiatrists, drug-abuse specialist testify in L.A. at first MDMA hearing," *Brain/Mind*, July 8, 1985. ■

Change cannot come until neither loyalty to the old nor the fear of the new can no longer delay it.

Jamake Highwater

SOCIAL ISSUES:

Broadcasting Software”

“Software Takes to the Air”

Edward Joyce

PC Magazine

May 28, 1985

Summary:

Last August radio station KAMT (Seattle) revolutionized both the radio and computer industries by broadcasting computer software on the air which can be received and saved in home computers. This new “Sofcast program” encompasses spreadsheets, flight simulators, picture files and games.

Making this transmission possible are two devices: Shutter Encoder and a Shutter Communicator. The Shutter Communicator is not limited to radio broadcasting; it can also act as a modem when it is connected to a touch-tone telephone, thus providing users

with limited two-way communication. By telephone, a home computer can now be connected to a bulletin board type information service which includes a menu with several options: news, user groups, restaurant guides, weather reports, classified ads, and eventually banking services and catalog ordering. In addition to the usage mentioned, there is also the potential of cable simultaneous broadcasting (simulcast). This technique combines both TV broadcast with FM frequency transmission. The result of simulcast will allow users to actively engaged in computer tutorial programs while they are being taught or advertised on TV.

With advertising revenue paying for the broadcasting of software, proponents believe that sofcasting can lead to the mass proliferation of computers, while radio and television could be the new peripherals of the computer age.

Comments:

While sofcast programs could speed up the transmission of enormous amounts of data to mass audiences and enhance advertisement of new computer pro-

ducts, it can be potentially abused. For example:

(1) Once again, pirating copyrighted materials could be done easier and faster and by a layperson. Such materials could include trade secrets, military secrets, confidential court documents and even non-copyrighted materials such as major examinations: LSAT, GMAT, GRE, or Civil Service.

(2) Unwanted advertisements could also be transmitted to computers and thus cloud up desk top space and create ‘electronic junk mail’. ■

The purpose of this newsletter is to keep you abreast of the latest issues, trends and research findings that may impact Hawaii Judiciary. If you find any of the issues selected of particular interest and would like more information (for example, a copy of the original article or other references) or if you would like to pass on issues and comments to us, please contact futures researcher, Anna Wilson-Yue at (808) 548-8589.

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