

40 Years in the Future

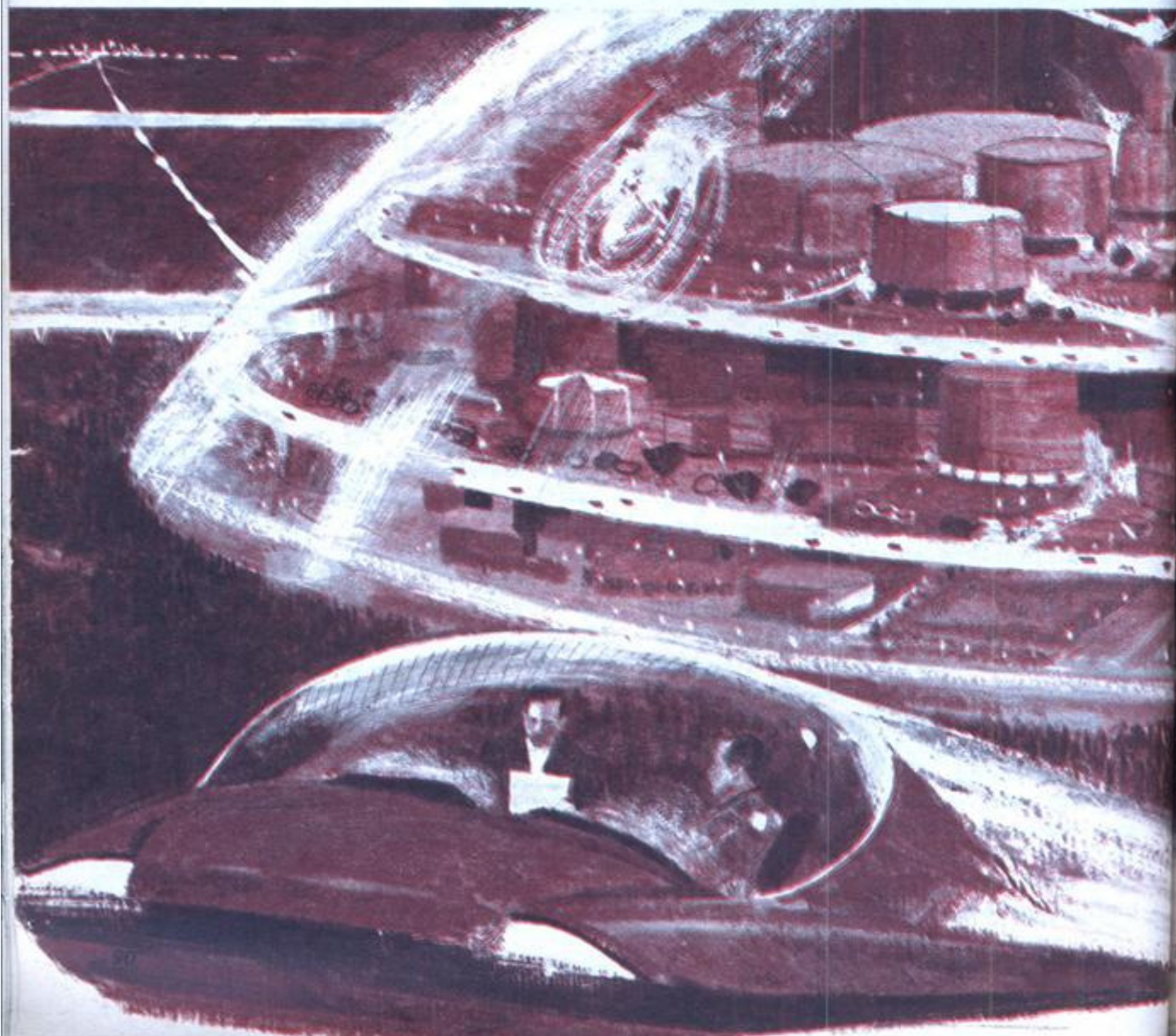
By James R. Berry

IT'S 8 a.m., Tuesday, Nov. 18, 2008, and you are headed for a business appointment 300 mi. away. You slide into your sleek, two-passenger air-cushion car, press a sequence of buttons and the national traffic computer notes your destination, figures out the current traffic situation and signals your car to slide out of the garage. Hands free, you sit back and begin to read the morning paper—which is flashed on a flat TV screen over the car's dashboard. Tap-

ping a button changes the page.

The car accelerates to 150 mph in the city's suburbs, then hits 250 mph in less built-up areas, gliding over the smooth plastic road. You whizz past a string of cities, many of them covered by the new domes that keep them evenly climatized year round. Traffic is heavy, typically, but there's no need to worry. The traffic computer, which feeds and receives signals to and from all cars in transit between cities, keeps vehicles at least

VEHICULAR travel between the domed, evenly climatized cities of 2008 is controlled by



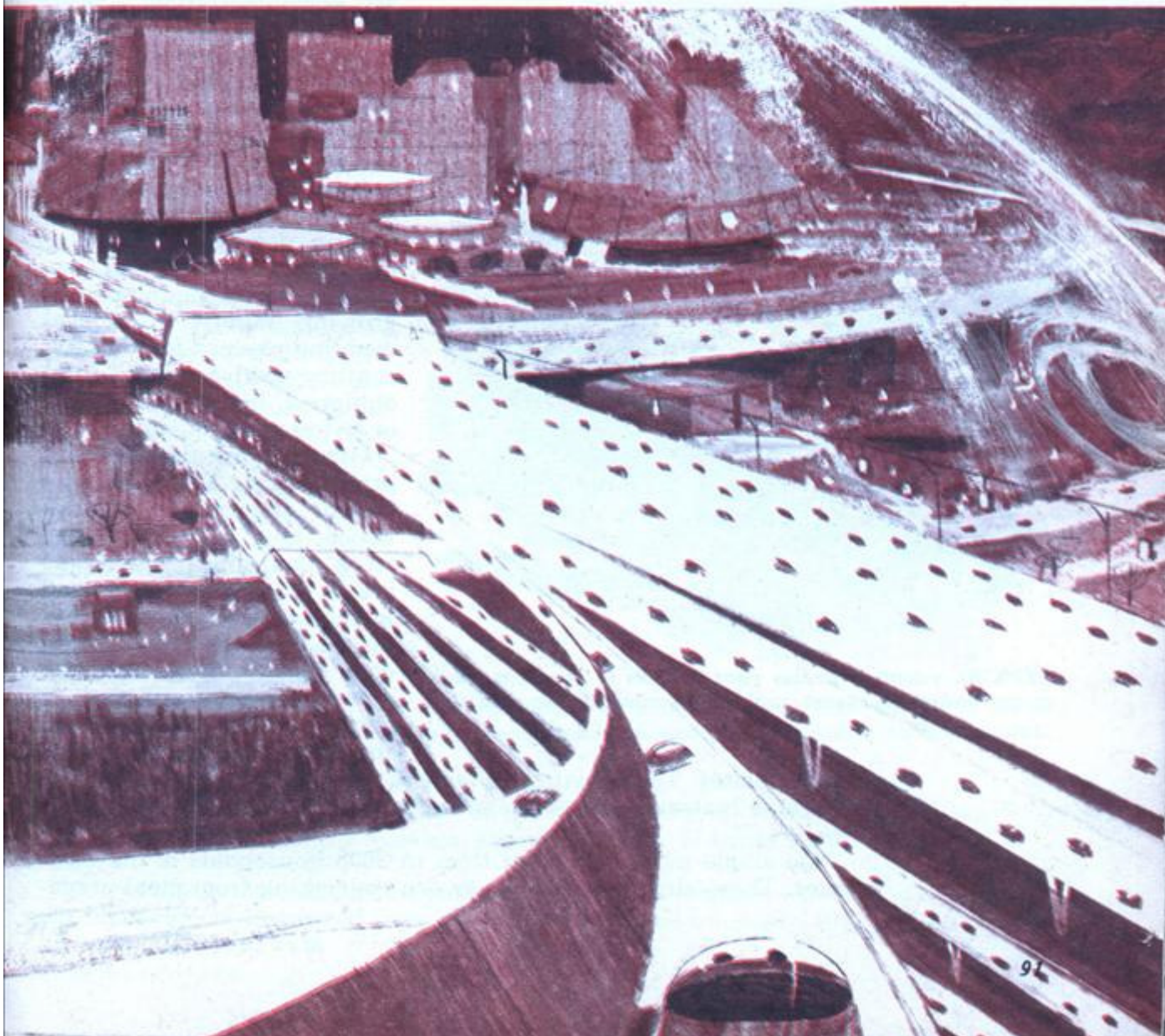
50 yds. apart. There hasn't been an accident since the system was inaugurated.

Suddenly your TV phone buzzes. A business associate wants a sketch of a new kind of impeller your firm is putting out for sports boats. You reach for your attache case and draw the diagram with a pencil-thin infrared flashlight on what looks like a TV screen lining the back of the case. The diagram is relayed to a similar screen in your associate's office, 200 mi. away. He jabs a button

and a fixed copy of the sketch rolls out of the device. He wishes you good luck at the coming meeting and signs off.

Ninety minutes after leaving your home, you slide beneath the dome of your destination city. Your car decelerates and heads for an outer-core office building where you'll meet your colleagues. After you get out, the vehicle parks itself in a convenient municipal garage to await your return. Private cars are banned inside most city

the national traffic computer, which guarantees perfect safety even at speeds of 250 mph.



40 Years in the Future

cores. Moving sidewalks and electrams carry the public from one location to another.

With the U.S. population having soared to 350 million, 2008 transportation is among the most important factors keeping the economy running smoothly. Giant transportation hubs called modemixers are located anywhere from 15 to 50 mi. outside all major urban centers. Tube trains, pushed through bores by compressed air, make the trip between modemixer and central city in 10 to 15 minutes.

A major feature of most modemixers is the launching pad from which 200-passenger rockets blast off for other continents. For less well-heeled travelers there are SST and hypersonic planes that carry 200 to 300 passengers at speeds up to 4,000 mph. Short trips—between cities less than 1,000 mi. apart—are handled by slower jumbo jets.

Homes in MI's 80th year are practically self-maintaining. Electrostatic precipitators clean the air and climatizers maintain the temperature and humidity at optimum levels. Robots are available to do housework and other simple chores. New materials for siding and interiors are self-cleaning and never peel, chip or crack.

Dwellings for the most part are assembled from prefabricated modules, which can be attached speedily in the configuration that best suits the homeowner. Once the foundation is laid, attaching the modules to make up a two- or three-bedroom house is a job that doesn't take more than a day. Such modular homes easily can be expanded to accommodate a growing family. A typical wedding present for the 21st century newlyweds is a fully equipped bedroom, kitchen or living room module.

Other conveniences ease kitchenwork. The housewife simply determines in advance her menus for the week, then slips prepackaged meals into the freezer and lets the automatic food utility do the rest. At preset times, each meal slides into the microwave oven and is cooked or thawed. The meal then is served on disposable

plastic plates. These plates, as well as knives, forks and spoons of the same material, are so inexpensive they can be discarded after use.

The single most important item in 2008 households is the computer. These electronic brains govern everything from meal prepa-



TYPICAL vacation in the year 2008 is to spend a week at an undersea resort, making excursions via minisub.

ration and waking up the household to assembling shopping lists and keeping track of the bank balance. Sensors in kitchen appliances, climatizing units, communicators, power supply and other household utilities warn the computer when the item is likely to fail. A repairman will show up even before any obvious breakdown occurs.

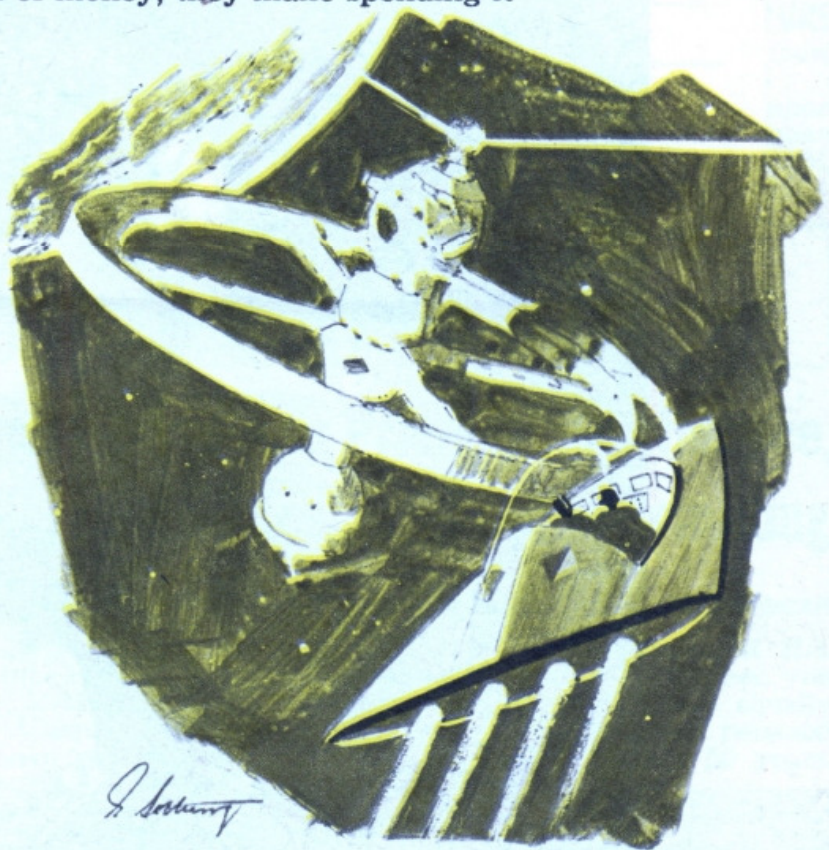
Computers also handle travel reservations, relay telephone messages, keep track of birthdays and anniversaries, compute taxes and even figure the monthly bills for electricity, water, telephone and other utilities. Not every family has its private computer. Many families reserve time on a city or regional computer to serve their needs. The machine tallies up its own services and submits a bill, just as it does with other utilities.

Money has all but disappeared. Employers deposit salary checks directly into their employees' accounts. Credit cards are used for paying all bills. Each time you buy something, the card's number is fed into the store's computer station. A master computer then deducts the charge from your bank balance.

Computers not only keep track of money, they make spending it easier. TV-telephone shopping is common. To shop, you simply press the numbered code of a giant shopping center. You press another combination to zero in on the department and the merchandise in which you are interested. When you see what you want, you press a number that signifies "buy," and the household computer takes over, places the order, notifies the store of the home address and subtracts the purchase price from your bank balance. Much of the family shopping is done this way. Instead of being jostled by crowds, shoppers electronically browse through the merchandise of any number of stores.

People have more time for leisure activities in the year 2008. The average work day is about four hours. But the extra time isn't totally free. The pace of technological advance is such that a certain amount of a jobholder's spare time is used in keeping up with the new developments—on the average, about two hours of home study a day.

Most of this study is in the form of programmed TV courses, which can be rented or borrowed from tape [Continued on page 140]



ROCKET RIDE to hotel satellite, plus vistas of earth and moon, makes an equally memorable vacation jaunt.

Boeing's 490-Passenger Jetliner

[Continued from page 109]

the world, pinpointing the big bird to landings in near-zero visibility.

After the imaginary flight it was time to become a potential passenger. Boeing showed us everything that will be available in terms of passenger comfort and convenience except for the 15 hostesses who will be on duty on each plane. Here is how it will be for a paying customer: He'll board through one of the ten entry doors (five per side, each 8 in. wider than the two doors on a 707) arriving through one of several telescoping passageways which will deliver him from the terminal building directly to the position nearest his assigned seat. At some airports, portable boarding ramps still will be in use, but it will take at least three of them to accommodate the full passenger load.

As our passenger heads for his seat he'll notice that there are two lengthwise aisles and five cross aisles. Both aisles and seats are at least 10 per cent wider than those on existing 707s. Ceiling height is 8 ft. and walls are near-vertical.

Passenger seating will vary according to airline requirements. Basic mixed class will be 58 first-class seats and 308 at lower fares, these latter nine abreast. In another version there will be 61 in first class and 336 arranged ten-abreast. One all-economy setup is 446 seats nine-abreast. Maximum is an all-economy, 490-seat, ten-abreast configuration.

First-class passengers can look forward to using an upper lounge (just behind the flight deck) accessible via a spiral staircase from the main cabin.

The 747 boasts five galley units and 15 lavatories. Something brand-new is the concept of overhead storage lockers. Hand luggage carried aboard will not be permitted under the seat.

Of course, passenger entertainment has not been overlooked. Each chair will have an armrest-mounted control panel which will operate reading lamp, cabin attendant call and a dozen audio channels for music and movies. Those passengers seated in the center section might as well sit back and enjoy the music and movie time in the air, counting it an interlude between cities rather than flight at 45,000 ft. After takeoff

they won't have much sensation of flight and, in any event, they won't be able to see much out of the distant cabin windows.

To date, 26 airlines have ordered 150 of the 747s, and Pan American gets the first one about the end of 1969. At \$20 million per copy, Boeing claims that the 747 will be an economy over the \$7-million 707. For one thing, the seat-mile direct operating cost is 32 per cent less for the 747—about .8 cent per seat-mile. What makes the airplane even more attractive is the profit potential—three times greater than today's jets even though it costs twice as much to operate.

One thing is certain: the 747 must revolutionize air travel if it is to be successful. It is estimated that only 15 per cent of the population flies today. Many more will have to be enticed aboard in the coming years. The airlines even now are planning massive advertising campaigns to sell *you* some of those extra seats which soon will be available. Boeing predicts that air travel will grow from 175 billion revenue seat-miles (a paying passenger flying one mile is a seat-mile) today to 425 billion by 1975.

If this happens the 747 will be right in there whooshing along. It really is the most of everything we have ever seen in aviation. •

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[Continued from page 93]

libraries. In fact most schooling—from first grade through college—consists of programmed TV courses or lectures via closed circuit. Students visit a campus once or twice a week for personal consultations or for lab work that has to be done on site. Progress of each student is followed by computer, which assigns end term marks on the basis of tests given throughout the term.

Besides school lessons, other educational material is available for TV viewing. You simply press a combination of buttons and the pages flash on your home screen. The world's information is available to you almost instantaneously.

TV screens cover an entire wall in most
[Continued on page 142]

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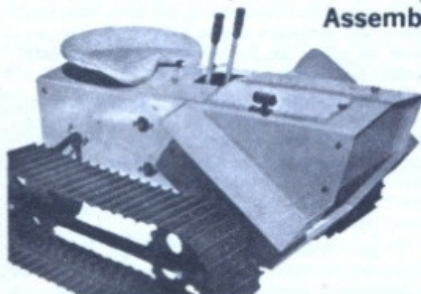
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homes and show most subjects other than straight text matter in color and three dimensions. In addition to programmed TV and the multiplicity of commercial fare, you can see top Broadway shows, hit movies and current nightclub acts for a nominal charge. Best-selling books are on TV tape and can be borrowed or rented from tape libraries.

A typical vacation in 2008 is to spend a week at an undersea resort, where your hotel room window looks out on a tropical underwater reef, a sunken ship or an ancient, excavated city. Available to guests are two- and three-person submarines in which you can cruise well-marked underwater trails.

Another vacation is a stay on a hotel satellite. The rocket ride to the satellite and back, plus the vistas of earth and moon, make a memorable vacation jaunt.

While city life in 2008 has changed greatly, the farm has altered even more. Farmers are business executives running operations as automated as factories. TV scanners monitor tractors and other equipment computer programmed to plow, harrow and harvest. Wires imbedded in the ground send control signals to the machines. Computers also keep track of yields, fertilization, soil composition and other factors influencing crops. At the beginning of each year, a print-out tells the farmer what to plant where, how much to fertilize and how much yield he can expect.

Farming isn't confined to land. Mariculturists have turned areas of the sea into beds of protein-rich seaweed and algae. This raw material is processed into food that looks and tastes like steak and other meats. It also is cheap; families can have steak-like meals twice a day without feeling a budget pinch. Areas in bays or close to shore have been turned into shrimp, lobster, clam and other shellfish ranches, like the cattle spreads of yesteryear.

Medical research has guaranteed that most babies born in the 21st century will live long and healthy lives. Heart disease has virtually been eliminated by drugs and diet. If hearts or other major organs do give trouble, they can be replaced with artificial organs.

Medical examinations are a matter of sitting in a diagnostic chair for a minute

or two, then receiving a full health report. Ultrasensitive microphones and electronic sensors in the chair's headrest, back and armrests pick up heartbeat, pulse, breathing rate, galvanic skin response, blood pressure, nerve reflexes and other medical signs. A computer attached to the chair digests these responses, compares them to the normal standard and prints out a full medical report.

No need to worry about failing memory or intelligence either. The intelligence pill is another 21st century commodity. Slow learners or people struck with forgetfulness are given pills which increase the production of enzymes controlling production of the chemicals known to control learning and memory. Everyone is able to use his full mental potential.

Despite the fact that the year 2008 is only 40 years away—as far ahead as 1928 is in the past—it will be a world as strange to us as our time (1968) would be to the pilgrims. •

40 Years Ago

[Continued from page 100]

a low-fi era of 78 rpm records played on hand-cranked phonographs. Hit songs of the day were My Blue Heaven, I'm Looking Over a Four-Leaf Clover, Baby Face, Louise (popularized by young Maurice Chevalier) and Showboat tunes, Bill, Old Man River, Why Do I Love You, to mention a few that have endured.

Talking pictures—Jolson's Mammy and John Barrymore's Sea Beast—were novelties that some enthusiasts thought would put the silents out of business. Theater musicians were confident that audiences

would never put up with canned music. Two systems, sound-on-film and sound-on-records, competed. The latter system often got out of sync and needed an operator in the audience who buzzed the projectionist to get back on the track. A hit picture of the year was Lilac Time, a silent movie with World War I background (we were only a decade removed from the Armistice). It starred Colleen Moore and a leading man who was a star from then on, Gary Cooper. All movies were black-and-white, [Continued on page 147]



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