

filtered lamps—the market in the Tucson area may not be large enough for manufacturers to provide what is needed—and possible objections from purveyors of food who may be afraid that the filtered light will make their wares appear unwholesome. But with Tucsonians appreciating the worth of the facilities in their area, the outlook looks favourable.

ENVIRONMENT

Senate Shoots Down SST

by our Washington Correspondent

BOTH the friends and foes of the supersonic transport were amazed by the vote last week by which the Senate resolved to cut off the funds for continuing with the aircraft. Up until the morning of the debate the \$290 million appropriation for the construction of two prototypes of the Boeing Company seemed assured of a certain, if narrow, passage. Even Senator William Proxmire, the sponsor of the amendment to strike out the funds for the SST, had expected at best to get within a few votes of a draw.

Last year the Senate voted to continue with the SST by a margin of 58 votes to 22; this time the tide flowed against the aircraft by a decisive 52–41 vote. What made so many Senators change their minds? The threat of losing markets to foreign competitors, in this case the Anglo-French Concorde, is usually a persuasive argument in Congress, added to which the SST has the support of the two powerful Senators from Washington state, where the Boeing Company has its headquarters—Henry Jackson and Warren G. Magnuson, chairmen of two key committees (Interior and Commerce) and wielders of considerable power and patronage. Of the two chief arguments against the SST raised by the environmentalists, the question of climatological disaster is ominous but visibly far from proven, and the issue of the sonic boom was cunningly defused the day before the crucial debate by Senator Magnuson, who rushed through the Senate a bill prohibiting overland flights by the SST and requiring that its engine noise be no louder than that of subsonic jets in present use.

There seems little doubt that the environmental issue was decisive in swinging the vote against the SST despite all the odds in the project's favour. Although the specific arguments advanced by the environmental pressure groups may have been resistible individually, their intensive lobbying and activities in Senators' home states were not to be lightly dismissed; after the mid-term elections last month no Congressman wishes to get tagged with an anti-environment label if he can help it. As Senators on both sides of the debate pointed out, the movement against the SST draws much of its strength from wider issues, of which the plane itself was only a symbol. These are that technology must be controlled and that glamour projects such as the SST should have a lower priority than the tackling of domestic disorders. Certainly the Senate's vote will be interpreted in this sense, and will remain a decisive influence on future projects of this nature, even if the funds for the SST should be reinserted at the forthcoming conference between House and Senate. The House of Representatives voted in favour of the aircraft and as it happens the seven conferees appointed by the Senate include Senator Magnuson, and three other supporters of the SST. The Senate is unlikely to

accept any conference agreement that writes back the full appropriation for the SST but a smaller sum that would still allow development to proceed could well pass.

The Senate vote on the SST cut across party lines—the 52 members who voted to delete the funds included 34 Democrats and 18 Republicans. Most of the Senate establishment, however, supported the project, twelve of the sixteen chairmen of standing committees voting in favour. The debate was notable for an unusually conspicuous piece of *force majeure*. Senator Mark Hatfield of Oregon found an item in the Transportation bill (of which the SST appropriations are a part) forbidding the extension of an airport in Oregon until further environmental studies had been undertaken. Claiming that exhaustive studies had already been made the Senator begged Senator Magnuson, the manager of the bill, to strike this clause out. Magnuson, chairman of the Commerce committee which prepared the bill, only replied "Let me say to my colleagues from Oregon that we will take this matter up after action on the Proxmire amendment (to strike out funds for the SST)". When Hatfield's name was called on the roll call he failed to vote and it was explained that he had had to catch a plane to fulfil a speaking engagement of long standing. Immediately after the SST vote Magnuson allowed the restriction on the Oregon airport to be lifted. Hatfield's vote, it turned out, was not needed; and in fact Senator Magnuson, according to one of his aides, released four votes pledged to him when he saw that the SST could not win anyway.

COMMUNICATIONS

Demise of Scientific Journals

by our Washington Correspondent

"ANOTHER damn, thick, square book—always scribble, scribble, scribble, eh, Mr Gibbon," the Duke of Gloucester is said to have observed on being presented with a new volume of the history. Not grumbling but apoplexy would be the reaction of Gibbon's patron to the literary output of today's scientific community. The average life scientist produces not one book every two decades but more than four publications a year, two of them being full length research articles. Added to which, many scientists are "notoriously poor writers", according to a report put out last week by the National Academy of Scientists.

The activities of this scribbling multitude have come under the scrutiny of the committee under Dr Philip Handler, president of the National Academy of Sciences, and are the subject of a special chapter in the report on the life sciences issued last week (see *Nature*, 228, 902; 1970). Discussing journals as a medium of scientific communication, the committee predicts that journals will eventually be rendered obsolete by the computer console, although it may take ten years before each major research centre in the United States possesses a suitable terminal, a further decade for small groups of scientists to come to own consoles and yet another ten years to provide links with other continents.

The daunting volume of the input into the system is documented by a questionnaire sent out to biological research workers in 1967, from which it appears that each scientist contributes on average four distinct publications to the "literature" annually (see Table 1). Surprisingly, the committee reports that although few