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Jack Spielberg* (spielberg@asu.edu), P.O. Box 871804, Tempe, AZ 85287-1804. *C*-algebras of left cancellative small categories*. Preliminary report.

While the C^* -algebra of a group is defined so as to duplicate the unitary representation theory of the group, it has been found that a different motivation is suitable for a semigroup. For example, the Cuntz algebra \mathcal{O}_n is obtained from the free semigroup on n generators, and Cuntz and Krieger showed how this is related to the one-sided Bernoulli shift on the space of infinite words in the generators. A semigroup that is left cancellative admits a shift map analogous to the Bernoulli shift on finite words, and there is a natural process that leads to the analog of the space of “infinite words”. In fact, all of this works just as well if the semigroup is replaced by a small category, as long as left cancellation still holds. In this talk I will describe this general process. (Received September 10, 2017)