The MPI interface provides four communicator construction routines that apply to both intracommunicators and intercommunicators. The construction routine MPI_INTERCOMM_CREATE (discussed later) applies only to intercommunicators.

An intracommunicator involves a single group while an intercommunicator involves two groups. Where the following discussions address intercommunicator semantics, the two groups in an intercommunicator are called the *left* and *right* groups. A process in an intercommunicator is a member of either the left or the right group. From the point of view of that process, the group that the process is a member of is called the *local* group; the other group (relative to that process) is the *remote* group. The left and right group labels give us a way to describe the two groups in an intercommunicator that is not relative to any particular process (as the local and remote groups are).

MPI_COMM_DUP(comm, newcomm)

IN	comm	communicator (handle)
OUT	newcomm	copy of comm (handle)

```
int MPI_Comm_dup(MPI_Comm comm, MPI_Comm *newcomm)

MPI_COMM_DUP(COMM, NEWCOMM, IERROR)
    INTEGER COMM, NEWCOMM, IERROR

{MPI::Intracomm MPI::Intracomm::Dup() const (binding deprecated, see Section 15.2)
              }

{MPI::Intercomm MPI::Intercomm::Dup() const (binding deprecated, see Section 15.2)
              }

{MPI::Cartcomm MPI::Cartcomm::Dup() const (binding deprecated, see Section 15.2) }

{MPI::Graphcomm MPI::Graphcomm::Dup() const (binding deprecated, see Section 15.2)
              }

{MPI::Comm& MPI::Comm::Clone() const = 0 (binding deprecated, see Section 15.2) }

{MPI::Intracomm& MPI::Intracomm::Clone() const (binding deprecated, see
              Section 15.2) }

{MPI::Intercomm& MPI::Intercomm::Clone() const (binding deprecated, see
              Section 15.2) }

{MPI::Cartcomm& MPI::Cartcomm::Clone() const (binding deprecated, see
              Section 15.2) }

{MPI::Graphcomm& MPI::Graphcomm::Clone() const (binding deprecated, see
              Section 15.2) }

{MPI::Distgraphcomm& MPI::Distgraphcomm::Clone() const (binding deprecated, see
              Section 15.2) }
```

MPI_COMM_DUP Duplicates the existing communicator comm with associated key values. For each key value, the respective copy callback function determines the attribute value