```
BAB = paths.SequentialEnsemble([
    paths.LengthEnsemble(1) & paths.AllInXEnsemble(B),
    paths.PartInXEnsemble(A) & paths.AllOutXEnsemble(B),
    paths.LengthEnsemble(1) & paths.AllInXEnsemble(B)
])

AB = paths.SequentialEnsemble([
    paths.LengthEnsemble(1) & paths.AllInXEnsemble(A),
    paths.OptionalEnsemble(paths.AllOutXEnsemble(B)),
    paths.LengthEnsemble(1) & paths.AllInXEnsemble(B)
])

BAB_paths = BAB.split(trajectory)
AB_paths = [AB.split(segment)[0] for segment in BAB_paths]
```

```
BAB = paths.SequentialEnsemble([
    paths.LengthEnsemble(1) & paths.AllInXEnsemble(B),
    paths.PartInXEnsemble(A) & paths.AllOutXEnsemble(B),
    paths.LengthEnsemble(1) & paths.AllInXEnsemble(B)
])

AB = paths.SequentialEnsemble([
    paths.LengthEnsemble(1) & paths.AllInXEnsemble(A),
    paths.OptionalEnsemble(paths.AllOutXEnsemble(B)),
    paths.LengthEnsemble(1) & paths.AllInXEnsemble(B)
])

BAB_paths = BAB.split(trajectory)
AB_paths = [AB.split(segment)[0] for segment in BAB_paths]
```

You may be able to write faster code…