Potentialities

A potentiality is a sequence of states that a system could pass through. It also encodes the potential change of state if it communicates with the exterior world.

```
open import PredP
open Pred

module PotP (Msg : 𝒰 ̇) (Secret : 𝒰 ̇ ) 𝒱 𝒲 where

open import Definitions Msg Secret

open import FCP {𝒲 = 𝒰 ⁺ ⊔ 𝒱 ⁺⁺ ⊔ 𝒲 ⁺} Msg Secret 𝒱

open ΣPred
```

BSet is a predicate on the messages that are received or accepted by a system.

&PSet is an abstract structure of the system, that will be used to check if the system reduces.

```
open import FunctorP
open import Final-CoAlgebraP

Fpot : Functor (𝒰 ⁺ ⊔ 𝒱 ⁺⁺ ⊔ 𝒲 ⁺)
Fpot =
    (λ X → X × (&PSet 𝒱 𝒲) × FC X)
  , (λ f (   x , &ps , ((mp ,         fm        ) , (ap ,          fa       ))) →
          f x , &ps ,  (mp , λ x c → f (fm x c)) , (ap , λ x c → f (fa x c)))
  , (λ f g x → refl)
  , λ x → refl

Pot = Final-CoAlgebra Fpot
```