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(*****
(* ReificationFromGeneralizedArrow: *)
(* *)
(* Turn a reification into a generalized arrow *)
(* *)
(*****)

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Generalizable All Variables.

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Require Import Preamble.
Require Import General.
Require Import Categories_ch1_3.
Require Import Functors_ch1_4.
Require Import Isomorphisms_ch1_5.
Require Import ProductCategories_ch1_6_1.
Require Import OppositeCategories_ch1_6_2.
Require Import Enrichment_ch2_8.
Require Import Subcategories_ch7_1.
Require Import NaturalTransformations_ch7_4.
Require Import NaturalIsomorphisms_ch7_5.
Require Import PreMonoidalCategories.
Require Import MonoidalCategories_ch7_8.
Require Import Coherence_ch7_8.
Require Import Enrichment_ch2_8.
Require Import Enrichments.
Require Import RepresentableStructure_ch7_2.
Require Import Reification.
Require Import GeneralizedArrow.

```

```

Definition reification_from_garrow (K:Enrichment) {ce} (C:MonoidalEnrichment ce) (garrow : GeneralizedArrow K ce)
: Reification K ce (enr_c_i ce).
  refine
  {| reification_r      := fun k:K => HomFunctor K k >>>> ga_functor garrow
   ; reification_rstar_f :=                                     ga_functor garrow >>>> C
   ; reification_rstar  := PreMonoidalFunctorsCompose garrow C
  |}.
  abstract (intros; set (@ni_associativity) as q; apply q).
  intros; apply ga_host_lang_pure.
  Defined.

```

