# The Applied Rationality Framework

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## 1 Introduction

In this article, we present our Applied Rationality Framework (ARF). The ARF is a collection of practice specifications that specifies and interrelated set of practices. When practiced, these practices iteratively align a person's goals, activities, and methods with their values and refines these activities and methods based on empirical experience to render them more effective, consistent, efficient, and less risky.

## 2 Practice Specifications

The ARF is a collection of practice specifications. A practice is a deliberate activity that is repeatedly performed. A practice specification describes "what" a practice does without prescribing "how" a practice is performed. A practice method describes how to perform a practice. When a practice method produces the effects specified by a practice specification, we say that the method satisfies the specification.

An ARF method, is a practice method that satisfies one or more of the ARF practice specifications. An ARF implementation is a collection of practice methods that satisfy all of the ARF practice specifications. To implement the ARF, you must develop methods that satisfy the ARF practice specifications. The practices prescribed by the ARF, iteratively revise these methods. So that over time, these methods better align with personal values and rational beliefs.

There are 13 ARF practice specifications. We list each of these specifications below:

1. **Identify values and goals** (identify-values)
   Subpractices:

   (a) Identifies values

   (b) Ranks values

   (c) Identifies Goals

   (d) Prioritizes Goals

2. **Formalizes activities** (define-forms)

3. **Structure behavior** (structure-behavior)

    - Organize actions around routines, plans, and deliberate decisions.

4. **Identify indicators and define metrics for evaluating actions** (define-metrics)

    - These indicators and metrics must indicate the degree to which actions and their consequences align with personal beliefs, values, goals, and priorities.

    - These indicators and metrics should assess the effectiveness, cost, consistency, correctness, and status of those actions.

5. **Define standards for actions that reference indicators and metrics** (define-standards)

6. **Periodically assess standards against personal beliefs, values, goals, and priorities** (assess-standards)

7. **Record information about personal actions** (record-actions)

    - These records must document observed problems and risks.

    - These records must note what actions were taken and when those actions were taken.

    - These records should note the costs and consequences of those actions.

8. **Use indicators and metrics to periodically evaluate actions against standards** (assess-actions)

9. **Attempt to identify possible changes to routines, plans, and decision making frameworks that will reduce the probability of documented problems and risks** (identify-changes)

10. **Periodically revise routines, plans, and decision making frameworks** (revise-forms)

11. **Asses the impact of revisions using standards** (assess-changes)

12. **Adopt or revert changes based on assessments** (adopt-changes)

13. **Maintain a formal system for documenting information needed to perform routines and plans, and use decision making frameworks** (maintain-records)

# 3 Practice Descriptions

## 3.1 Identify values and goals (identify-values)

### 3.1.1 Goals

1. **Identify implicit values**

   (a) Identified values are emotionally significant. The realization of values is associated with positive affect. The absence of these values are associated with negative affect.

   (b) Recorded emotional states correlate with identified values. Recorded emotional changes can be linked to situational changes demonstrating that the identified values are actually implicit values.

2. **Document values so that they can be referenced**

   (a) The values are listed.

3. **Rank these values by significance**

   (a) The listed values are assigned some ordinal ranking.

   (b) When situations occur when values must be compomised the emotional impact experienced agrees with the assigned ranking.

4. **Establish goals**

   (a) The goals are listed.

   (b) The list includes descriptions sufficient for determining when a goal has been met.

5. **Establish the connection between goals and values**

   (a) There exists a list of goals that includes the values that it aligns or conflicts with along with some indication of the weight of this alignment or conflict.

### 3.1.2 Relation to other practices

- define-forms, structure-behavior, define-metrics, define-standards, assess-standards, assess-actions, assess-changes, and adopt-changes

  formalize activities and methods and evaluates these activities and methods using metrics and standards that are aligned with the values and goals identified by this practice.

## 3.2 Formalizes Activities (define-forms)

A form describes an activity by stating the actions that comprise the activity, conditions for performing those activities, their attributes (such as the time, location, instruments, and resources used when performing an activity), and their anticipated effects. Routines, schedules, plans, and decision making frameworks (such as rubrics, and decision trees) are examples of forms.

The define-forms practice requires a person to formalize their activities and to develop decision making frameworks for assessing the degree to which potential decisions align with personal beliefs, values, goals, and priorities.

### 3.2.1 Goals

### 3.2.2 Relation to other practices

# 4 Implementation Path

An implementation path is a series of implementation levels. An implementation level is a subset of ARF practices. Each level in an implementation path includes the practices included in previous levels while introducing a set of additional practices that, when practiced, achieve some goal. An implementation path organizes the ARF practices into a sequence that can be implemented incrementally and also provides a scale that can be used to characterize the degree to which a person is implementing the ARF framework.

The recommended implementation path consists of 7 levels and is presented below. You can use the implementation path presented below as a basis for a plan to implement the ARF framework, and as a scale to assess the extent to which a person has implemented the ARF framework.

1. **Disordered**
   At this level, the person is not practicing any of the ARF practices. Instead they are operating in an ad-hoc fashion responding to issues as they arrive and lacking a coherent set of values, priorities, or goals.
   **Practices Implemented**: none

2. **Scheduled**
   Tasks are scheduled using ToDo lists, calendars, etc, and activities are structured around informal routines.
   **Practices Implemented**:

   - structure-behavior

3. **Prioritized**
   The person has begun considering their implicit values and articulating goals. Activities are prioritized, undertaken, and occassionally rejected based on their alignment with these values and goals.
   **Practices Implemented**:

   - identify-values

4. **Documented**

The person has begun to document their goals, but their implicit values may remain ill-defined. They are documenting their schedules, plans, and routines, but not necessarily their methods or decision making frameworks. Additionally, they consistently update these schedules, plans, and routines as needed. Furthermore, they record what activities they have completed by making entries in a log, journal, checking off items on ToDo lists, etc.

**Practices Implemented**:

- define-forms
- record-actions
- revise-forms

5. **Systemmatic**

The person now documents the methods used during activies in the form of recipes, routines, checklists, etc. These methods are documented in a form that can be modified to record improvements and variations. Activity records such as log entries include the methods used. Periodically, the person reviews these methods and identifies potential improvements.

**Practices Implemented**:

- define-forms
  the person now documents methods
- record-actions
  the person now records the methods used
- revise-forms
  the person now periodically reviews the methods used and integrates improvements

6. **Aligned**

The person systemmatically identifies their implicit values, ranks these values, links their goals to their values, and prioritizes these goals based on their underlying underlying value hierarchy. When prioritizing activities they refer back to these underlying values and have now formalized this process in the form of decision making frameworks such as rubrics.

**Practices Implemented**:

- define-forms
  defined forms include decision making frameworks to align activities and prioritizations with underlying values.

7. **Empirical**

At this level, the person has identified indicators that indicate success. They have developed methods for measuring, classifying, or otherwise categorizing these observable indicators and have documented these metrics. They've established thresholds for these metrics that reflect their underlying values and goals, and have documented these standards. When they

undertake activities and complete tasks they record these metric measurements to document the effectiveness of the methods used. They maintain a record of these measurements to provide empirical data from which to learn.

**Practices Implemented**:

- define-metrics
- define-standards
- assess-standards
- assess-actions
- maintain-records

8. **Refining**

At this level, the person is performing all of the ARF practices and is continually refining their goals, forms, and methods based on empirical data encapsulating past experience. They may be using models to anticipate the effect of various activities, and are able to apply these models using the real-world data that they have collected.

**Practices Implemented**:

- adopt-changes
  changes are adopted or rejected based on empirical data