Dynamic System Property: *atis*Spillageness

(*Dynamic system properties* are those properties that are part of the theory and describe patterns in time as change occurs within a system or between a system and its negasystem.)

Spillageness, $\mathcal{S}(\mathbb{S})$**,** $=_{df}$ feedin that is blocked by the feedin system-capacity-control qualifier of filtration or feedout system-capacity-control qualifier of regulation.

$$\mathcal{S}(\mathbb{S}) =_{df} \{x \mid {}^{capacity}\mathcal{L}_C\langle \mathcal{F}_x(\mathbb{S})\rangle = \mathsf{T} \vee {}^{capacity}\mathcal{L}_C\langle \mathcal{R}_x(\mathbb{S})\rangle = \mathsf{T}\}$$

Spillageness is defined as a set of components such that; x satisfies the predicate that defines the system-capacity-control qualifier of filtration or the system-capacity-control qualifier of regulation.

A chart explaining **spillage** is shown on the next page.

Spillage

Feedin

Toput Feedin

**Feedin Exceeds
System Capacity**

Toput

Spillage

**Filtration—Feedin
System-Capacity-Control
Qualifiers**

Input

Feedout

Fromput Feedout

**Feedout of Unnecessary
Capacity is Blocked for
Output, but Is Made
Available for Spillage**

Fromput

**Regulator—Feedout
System-Capacity-Control
Qualifiers**

Output

Spillage is the result of *System-Capacity-Control Qualifiers* not allowing feedin to exceed system capacity, and allowing feedout to place in spillage that which is not provided for feedout. (1) In the first instance, it is as though a person is drinking too fast for the capacity of intake and spills what cannot be consumed. Maximum-capacity is exceeded. (2) In the second instance, it is the nutrients in the intestine that are not required for sustenance, but are made available to the commensal bacteria for their benefit. The nutrients are not available for expulsion from the system, but are made available in spillage as nutrients not required for the system. Minimal-capacity requirements are maintained. Another example of *spillage* is pilfering by company employees. The taking of pens, supplies, etc. generally does not affect the company operation, and is not *output* of the company. This pilfering is the acquisition by employees of *spillage*.