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Hansson, Sven Ove, *The Structure of Values and Norms*, Cambridge University Press, 2001.

Hansson has written an excellent book on the logic of preferences and norms. In it, he both illuminates the concept of preference through logical analysis, and connects it to value predicates like "good" or "worst" as well as to normative predicates like "should" and "ought." Although formal in style, the book is by no means written for logicians only. Hansson takes great care to discuss the intuitions behind the formal framework and strives for a compromise between realism and formal rigor. Anyone interested in economics, decision theory, political philosophy or social choice theory is well advised to familiarize herself with the (not too difficult) logical machinery, as there are lots of insights to be reaped from Hansson's work. The book incorporates reworked material from 18 of the author's papers, written over the last decade and a half. In addition, it provides many new results due to its unified approach and to Hansson's often critical scrutiny of his earlier views.

The book consists of three parts: a discussion of preference relations, and, building on that, a discussion of monadic value predicates and of norms. The first part is the most extensive and is fundamental for the other two. It is also the one where Hansson's work is most innovative. Here he introduces a new justification for the rationality requirements imposed on certain types of preference and compares it with the mainstream money-pump arguments. He then offers a model of preference change completely different from previous approaches and finally proposes a *holistic* interpretation of non-basic preferences in terms of basic ones. With the very sensible distinctions that Hansson makes between different types of preferences, this section offers an interesting analysis of the necessary conditions for understanding preferences, with important results for decision theory. In the second part of the book, Hansson seeks to define monadic value predicates like "good" or "worst" in terms of the relational predicates "better" or "worse." In the third part, he discusses normative predicates like "should" and "ought." He distinguishes these predicates according to their range of applicability: whether they refer to a particular and actual situation, to a counterfactual or to a general context. His innovative contribution here consists mainly in the development of an alternative semantic for these predicates, and in his attempt to define them in terms of preferences, while carefully avoiding a reductive account. In the final sections of the third part, he uses general normative predicates to analyze legal relations.

In the following, I will restrict my discussion to four aspects of Hansson's rich book: the rationality requirements imposed on different

types of preference, his model of preference change, his account of holistic interpretation and his treatment of situationist and counterfactual norms.

Rationality Requirements. Hansson makes two basic distinctions between preferences. First, he differentiates preferences with respect to the types of their alternatives. An agent might prefer one alternative to another, she might be indifferent or withhold her judgment. The alternatives the agent compares in this way are descriptions of events or facts; they therefore are susceptible to logical inference. If the alternatives are logically inconsistent, Hansson calls the preference relation *exclusionary*, if the alternatives are logically compatible, the preference relation is called *combinative*.

The second distinction Hansson makes between preferences is with respect to their function. A preference minimally functions as a comparison between two alternatives. Such a preference is called *pairwise*. But the agent might see her comparisons in a larger context of many alternatives, as one does when having a preference between wine, beer and juice for a drink accompanying dinner. Here, the combination of pairwise comparisons helps in making a choice from a set of alternatives larger than two; preferences which fulfil such a function are therefore called *choice-guiding*.

The only requirement that pairwise exclusionary preferences have to satisfy is the reflexivity of weak preferences. Choice-guiding exclusionary preferences, on the other hand, have to satisfy more restrictive rationality criteria. Nonetheless, it is remarkable how weak Hansson's minimal requirements for rational preferences are: neither completeness nor full transitivity are stipulated. Beyond these minimal requirements, Hansson sees the question of rational preference in terms of a trade-off between function and cost. "Is it more costly to make my preferences more sophisticated or to deliberate with a rudimentary preference ordering?" is the consideration that determines the choice of criteria. In particular, it determines the extent of the preference ranking over the set of alternatives, as well as over subsets of this set. Having to choose between three brands of tomato ketchup, for example, the agent might prefer brand *A* to both *B* and *C*. A preference relation between the latter two does not help her decision at that moment, hence establishing this preference does not yield a net gain for her. Nevertheless, if she anticipated that brand *A* might be unavailable in the future, then establishing a preference relation over the alternative set $\{B, C\}$ might yield an advantage for her future choices that is greater than the comparison costs involved. Depending on this trade-off, it can be rational to require the preferences to satisfy transitivity, completeness or antisymmetry.

Hansson's decision-theoretic approach is an innovative alternative to the common justification of the rationality requirements imposed on preference sets, but it is not without controversy. For want of an objective

measure, the “gain” or “loss” from making one’s preferences more or less sophisticated is comprehensible only as the agent’s subjective evaluation. She decides how much comparison costs she is willing to trade for more versatility in future decision situations; and she does so on some sort of meta-ranking. Thus Hansson’s approach is in danger of infinite regress, since the rationality criteria for an evaluation would then be justified by recourse to another evaluation. The justification must therefore be kept on the informal and intuitive level, and our intuitions as to what is advantageous and what is not, might just be as vague as our direct intuitions about rationality requirements were in the first place.

Preference Change. If a choice-guiding preference ranking must satisfy certain rationality criteria, then the change of a single pairwise relation in it, or a change in the alternatives available, might have consequences for the whole ranking: to maintain consistency with the criteria, the ranking has to be adapted to the change. This is the basis of Hansson’s model of preference change, which is closely related, both in structure and in its proof methods, to the better known model of belief revision of Alchourrón, Gärdenfors and Makinson. The three pillars of his model are: (i) the interpretation of preference changes as initiated by one of four *inputs*: the change and the removal of a binary relation, and the addition and the removal of an alternative; (ii) the reducibility of all inputs to sequences of these four basic types; and (iii) a sentential representation. The first assumption, in particular, is problematic:

the input-assimilating model is based on the simplifying assumption that the cause(s) of a change can be represented in the form of an input. (44)

In belief change, the intake of new information is the predominant if not exclusive cause of new beliefs. At the same time, the sentence representing this information can be used as the input that (logically) necessitates further adjustment in the belief set. The causes of belief change and the representation of beliefs are thus closely connected. In the case of preference change, the cause and the input often come apart. The causes of preference change are manifold: social pressure, new beliefs, physical conditions, etc. The input in Hansson’s model, on the other hand, is only a command to change or remove a relation or an alternative in the representation. The connection between causes and Hansson’s input commands would require a separate causal model, but such a model does not fall within the competence of a logical treatment. What is not clear is whether all causes of preference change can even be represented as the input that Hansson requires. For example, social pressure might have an effect through a change of the consistency criteria imposed on the preference model (e.g. by telling the agent to “loosen up” or “enjoy a

little craziness" in her desires). For such a case, no "input" in Hansson's sense can be constructed.

Unlike the common belief dynamics models, Hansson's model of preference change starts with a *revision operator*. Two principles guide its construction: the preference adjustment should be minimal, and which preferences are adjusted depends on some external information – the so-called priority index. Hansson's way of designing this priority index is innovative, as he offers a different structure from that used in belief dynamics. The *contraction operator* on the other hand is constructed on the basis of the revision operator. This leads to the satisfaction of the *postulate of recovery*, which states that a preference model contracted by a preference can always be recovered by revising the contracted model by exactly that preference. The controversial character of the recovery postulate is revealed in the following example: an agent prefers A over B and B over C . Hence by transitivity, she prefers A over C . Now she drops her preference $A > C$. In order to comply with transitivity, at least one of the other two preferences has to be removed from her overall evaluation (and it might well be possible, for lack of a specifying criterion, that she removes both). In any of the three resulting versions, a subsequent revision by $A > C$ will not restore the original preference model.

Original preference model: $\{A > B, B > C, A > C\}$

Contraction by $A > C$: (i) $\{A > B\}$ (ii) $\{B > C\}$ (iii) \emptyset

Revision by $A > C$: (i) $\{A > B, A > C\}$ (ii) $\{A > C, B > C\}$ (iii) $\{A > C\}$

Models of preference change should allow for such cases, as they play an important role in preference dynamics. The recovery postulate is therefore overly restrictive.

Preference Holism. Hansson next turns to combinative preferences, which are differentiated from exclusionary preferences by the structure of their alternatives in two ways. First, combinative preferences have logically compatible relata (like "I prefer owning a flat in New York to owning a house in Tuscany"), while the alternatives of exclusionary preferences are mutually exclusive ("I prefer being a student over not being a student"). Second, alternatives of exclusionary preferences are maximally specified, while relata of compatible preferences are not so. Hansson distinguishes two ways of relating exclusionary to combinative preferences. The *aggregative approach* derives exclusionary preferences from combinative preferences. The *holistic approach*, on the other hand, takes maximally specified alternatives as the fundamental bearers of value and interprets combinative preferences with reference to them. Hansson, who subscribes to the second approach, constructs an interpretation of pairwise combinative preferences in two steps. In the first step, he

offers an interpretation of combinative preferences as a relation between incompatible alternatives. The basic idea is to reinterpret a combinative preference for p over q as a preference for $p \wedge \neg q$ over $q \wedge \neg p$. A problem arises in cases where it is logically or causally impossible that $p \wedge \neg q$. Hansson casts such a possibility as the case where for all maximally specific alternatives $A \in \mathcal{A}$ such that $p \in A$, it necessarily holds that $q \in A$ and notates this $p \models q$. His amended translation procedure for combinative preferences then runs as follows. First he defines:

$p /_{\mathcal{A}} q$ (“ p and if \mathcal{A} -possible not- q ”) is equal to $p \wedge \neg q$ if $p \models q$ is false. Otherwise, $p /_{\mathcal{A}} q$ is equal to p .

And further:

The informal statement “ p is better than q ” is translated into $(p /_{\mathcal{A}} q) > (q /_{\mathcal{A}} p)$, and “ p is equal in value to q ” is translated into $(p /_{\mathcal{A}} q) \equiv (q /_{\mathcal{A}} p)$.
(70)

With the help of the translation procedure, Hansson in the second step constructs a selection function f from pairs of (interpreted) combinative alternatives to pairs of maximally specific alternatives. This way, combinative preferences can be interpreted with reference to preferences over the set \mathcal{A} of maximally specific alternatives:

$p \geq_f q$ if and only if $A \geq B$ for all $\langle A, B \rangle \in f((p /_{\mathcal{A}} q, q /_{\mathcal{A}} p))$.

What is at issue here is which pairs $\langle A, B \rangle$ the function picks out. Hansson proposes the *ceteris paribus* approach:

Any given alternative that contains $p /_{\mathcal{A}} q$ is preferred to any alternative that differs from the first in that it contains $q /_{\mathcal{A}} p$, but is otherwise as similar as possible to it. (75)

Hansson then correctly points out that a *logical* operationalization of the concept of “as similar as” can only work under assumption of logical atomism and hence should not be followed. Instead, he employs a four-place similarity relation (on the basis of extralogical information) and discusses its logical properties, but abstains from providing any clue as to how it could be measured.

My concern here is with the *ceteris paribus* approach. If the maximally specific alternatives are broad enough, for example if they were possible worlds, hardly any combinative preference would stand the *ceteris paribus* approach. Take an example of Rainer Trapp: even though it can plausibly be said that I prefer contracting Cholera to having cancer, I prefer the second to the first in a world where Cholera was incurable but cancer was curable. Hansson himself quotes this example, but claims that his approach of *Myopic Holism* avoids this problem. *Myopic Holism* takes

maximally specified alternatives to be “alternatives that cover all the aspects under consideration – but not all the aspects that might have been considered” (59). This introduces an arbitrariness which puts the formal rigor into question – how can we be sure, as Hansson seems to be, that “in general, the maximally similar but contextually irrelevant pairs of complete alternatives have been excluded when the alternative set was selected” (78), and why should we rest content with such a vague selection process? Hansson here jumps on the *small-world* bandwagon without clarifying the question of what these small worlds are supposed to be.

The *ceteris paribus* approach was designed to interpret pairwise combinative preferences. When interpreting choice-guiding combinative preferences, in contrast, all maximally specific alternatives which represent a combinative relata have to be taken into account. Hansson therefore interprets choice-guiding preferences as preference relations over sets of maximally specified alternatives. For example, “I prefer staying home over watching a movie” is a preference for the set of possible domestic experiences over the cinematic ones. Sometimes, information is available as to which of the alternatives in one set will be realized. Depending on that information, Hansson distinguishes two approaches. The *prognostic approach* uses all available information, while the *agnostic approach* treats the outcome as completely undetermined. Let’s imagine a choice between staying home and going out to watch a movie, when the two things to do at home are either practicing the piano or watching TV and the values of the three alternatives are $V(\text{piano}) = 4$, $V(\text{cinema}) = 2$ and $V(\text{TV}) = 0$. The prognostic approach determines the preference between staying home or going out as a weighted average of the values of the maximally specific alternatives. If it is probable that if I stay home, I will watch TV, then I will prefer going out.

It is noteworthy that this approach does not really fit with the rest of the book: in order to obtain a weighted average, cardinal values are needed for the alternatives, and this cardinal information cannot be derived from the exclusionary preference relation alone.

Norms. In the last part of his book, Hansson attempts to show that deontic predicates can be defined on the basis of preference relations. First, he claims that all action-focused normative predicates can be translated into a predication of states of affairs. “The agent ought/is permitted/must not **a**” becomes “It is required/permitted/prohibited that the agent do *A*.” This way, normative predicates take the same arguments as preferences. Second, he requires normative predicates to differ in stringency, such that they are ranked according to their strength. Third, he requires the three groups of predicates to be *unilaterally* interdefinable at all levels of stringency. That is, for “It is wrong to do *X*” at any level, there

is an equivalent predicate “It is required not to do X;” and similarly for “It is permitted to X,” which is equivalent to some predicate “It is not required not to do X.” Fourth, he distinguishes between different “perspectives” of one and the same situation, with a perspective being “that which determines what states of affairs are taken into consideration in the appraisal of a given situation” (135). Fifth, Hansson distinguishes normative predicates by the situation they refer to: to a particular and actual situation, or to particular and possible situations. Even though these distinctions, in particular the fourth and the fifth, sound plausible at first hearing, Hansson makes too heavy use of them to rely on their intuitive justification alone. A more formal treatment would have been desirable here.

Situationist deontic logic treats normative predicates that refer to a particular and actual situation within one perspective. Hansson finds fault with the basic semantic structure of standard deontic logic for its principle of *necessitation*: “whatever is necessitated by a moral requirement is itself a moral requirement” (141). Hansson holds this principle responsible for the so-called deontic paradoxes (Ross, Good Samaritan, etc.). He instead offers an alternative semantics for deontic logic, by stipulating prescriptive predicates to be *counternegative*. Counternegativity relates the validity of a normative predicate to a combinative preference ordering in the following way:

$$H \text{ is counternegative with respect to a given preference relation } \geq \text{ iff } Hp \wedge (\neg p) \geq (\neg q) \rightarrow Hq$$

As the predicates are interdefined, this provides the core for a semantics for all groups of predicates. Hansson then proceeds to show that the nondesirable properties of standard deontic logic do not hold for most of those predicates (that is, mainly versions of the necessitation principle), while desirable properties like *agglomeration* and *permissive cancellation* do hold.

I do not find Hansson’s alternative altogether convincing, because it substitutes a system with too strong principles for something too weak. After all, necessitation is plausible in many circumstances, and should not be altogether dispensed with. Take the example where you ought to support your grieving friend, and supporting him implies that you do not go on a planned holiday that day. Then it seems correct to conclude that you ought not to go on that holiday – but nothing in Hansson’s situationist logic allows such a derivation.

Next, Hansson extends the normative predicates to counterfactual situations. These applications are primarily of interest for their possible violation of the “ought implies can”-principle. The case where prescriptive predicates cannot be obeyed leads to a *moral dilemma*. Hansson’s treatment is twofold: on the one hand, he preserves the normative predicate as

a moral but non-obeyable requirement, on the other he “pragmatically resolves” (175) the situation by introducing an action-guiding, *maximally obeyable* prescription derived from the moral obligation. This is an important distinction: you are not free to do whatever simply because you have violated an obligation – a problem that arises in standard deontic logic. Unfortunately, Hansson offers a formal treatment only for that subset of counterfactual predicates whose antecedent removes some of the alternatives of action.

In conclusion, despite my criticism, I think this is an excellent book. Preference logic is a relatively new field, and Hansson certainly sets its newest standard. Any research on those topics will have to consult his work, and researchers will find the many properties proved for the concepts, as well as the proofs themselves, of great help.

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The Theory of the Individual in Economics: Identity and Value, by John B. Davis.
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Any theory that apparently shows how the exercise of individual freedom can lead to efficient outcomes rather than some form of chaos is bound to appeal to a political theory that places individuals and their freedom at its center. This is not the only source of attraction between neoclassical economics and liberal political theory. Political arguments are naturally stronger when they seem to work with a recognizable model of human behavior, and the apparent power of the rational choice model in explaining politics has as a result further deepened the relationship.

The point of John Davis’s new book, however, is to signal the end of this affair. The reason is simple. The picture of the individual supplied by neoclassical economics is too slight to justify the weight placed on the individual in liberal political theory. A different, “thicker” model of the individual is required for this purpose: one where the individual has a recognizable identity which comes from being historically and socially embedded.

The question of what kind of economics should inform political discussion is the broad context for this book. The flip side to this question focuses more narrowly on what kind of individual should be at the heart of economics. Although Davis has one eye on the broader picture, for the most part this is a book for economists and so it is concerned with opening a space within economics where the individual can be discussed