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A Covenant with Transparency:
OPENING THE BLACK BOX OF MODELS

Ethics and practicality both require the designers of decision support models to make the workings of their models visible to the users.

One important ethical aspect of the use of models for decision making is the relative power of the various actors involved in decision support: the modelers, the clients, the users, and those affected by the model. Each has a different stake in the design of decision support models, and the outcome of modeling depends on both the technical attributes of the model and the relationships among the relevant actors. Increasing the transparency of the model can significantly improve these relationships. Here, we explore the importance of transparency in the design and use of decision support models.

While other scholars have identified ethical standards that modelers should adopt, without transparency it may be impossible for users to determine whether modelers adhere to these standards. Mason [8] identifies two essential obligations of modelers to users: the "covenant with reality" and the "covenant with values." Similarly, Johnson and colleagues [1, 4, 5] discuss the ACM Code of Ethics and its utility in the professionalization of decision support modeling. Since users are most directly accountable for any errors resulting from use or misuse of a model [5], steps must be taken to empower them so they are not overly dependent on modelers and can make fully informed decisions based on a clear understanding of the decision support model.

Transparency is an essential tool for preserving the autonomy of users and empowering them relative to model builders. Modelers should work with users, rather than expecting users to work for them as mere implementers of models. At the human-machine interface, models should help users, not the other way