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On Symbiosis and Agility: A Response

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In a recent issue of this journal, Mr. Kidd reviewed our book *The Symbiosis of Work and Technology*. His judgment is negative: according to Mr. Kidd the book is dated even though recently published. Instead of the approaches discussed, which are labeled "sociotechnical" by Mr. Kidd, he puts forward the concept of "agile manufacturing." The difference between what we call "symbiotic" approaches and agile ones apparently lies in the latter's market orientation. The importance of this market orientation is supposedly not sufficiently recognized in our book: "apart from the contribution of the American authors . . . this has not been recognized." Furthermore, with exception of two contributors our book presents "well-rehearsed and aired opinions."

Mr. Kidd is right in saying that any design-oriented approach, whether paying attention to social and organizational factors or not, is unlikely to succeed if it does not pay, or at least if key organizational decision-makers, generally top management, are not convinced of the approach's financial contribution. This position is taken repeatedly in our book (f.i. pp. 6-8 and p. 143). Professor Malcolm Warner even ends his foreword by stating that "(b)usiness and senior managers will only be impressed by 'bottom-line' justifications in these difficult times!" But just how important are market conditions in this respect? It is the prevalent view in much of the managerial and academic literature that product markets become increasingly turbulent and volatile, or more precisely: product variety increases, and life cycles, repeat orders, and batch sizes decrease. On p. 16 of our book, Wobbe draws on a figure, derived from an earlier publication of Mr. Kidd and used by him in his book *Agile Manufacturing* (Kidd, 1994: 14), to demonstrate this view. These market developments presumably favor the diffusion of symbiotic, or agile for that matter, approaches. The argument that static markets fit well with Tayloristic, bureaucratic, mechanistic organizations, whereas dynamic markets require more organic approaches is even a classic argument in organizational sociology (Sorge, 1991:165). There are, however, two problems in this respect. In the first place, it is hard to find empirical evidence that product markets actually change from static to dynamic. Given the widespread acceptance of this view, the lack of statistical evidence supporting it is surprising. Admittedly, there are many examples, especially in consumer electronics and the car industry, of the supposed trend, but this also holds for counter examples, such as modularization (see Benders, 1993:48-60 for a more elaborate discussion of these points). Secondly and more importantly, the association of symbiotic/agile approaches with dynamic markets might lead to the conclusion that they are not suited for static markets. The star case of sociotechnical design, Volvo's Uddevalla plant, indicates that this is not necessarily the case. On the basis of extensive analyses of performance data, one of Uddevalla's leading engineers, Dr. Tomas Engström, Jonsson and Medbo, 1996). Its closure was due to a dras-

tically reduced demand for Volvo cars, not to insufficient performance as is widely assumed by those without access to such empirical data. The point here is that there may be a business case for sociotechnical methods even where market circumstances at first sight do not seem to favor their application, and that they are not just applied for social and ethical reasons as Mr. Kidd asserts. The Dutch sociotechnical case, as described in the book, explicitly starts from what is called "the quality of the organization," meaning an organization's capability to conform with market requirements. Admittedly, this stress on competitive performance may not be typical for all sociotechnical methods in the world, but the very point of bringing researchers from various countries together and editing a book such as ours is bringing such differences to the fore. By doing so we had hoped to show that the statement "sociotechnical approaches as we know them are too narrow," as Mr. Kidd asserts, is not necessarily true. It is unfortunate that we appear to have failed. Perhaps our views are not aired well enough and need rehearsing. In a way, Mr. Kidd has rehearsed them, but then under the title "agile manufacturing." This concept can even be easily subsumed under the label "symbiotic approaches." A vital difference, however, concerns the target audience. Whereas *The Symbiosis of Work and Technology* is primarily aimed at an academic audience and tries to put symbiotic approaches in a critical light (as another reviewer noted: Mills, 1995), *Agile Manufacturing* is aimed at practitioners (Kidd, 1994: viii). Consequently, the words used (and the books' tones) differ—as they should. There is definitely a case for a word such as *agile*, which may be more appealing to practitioners than *sociotechnical* or perhaps *symbiotic*. As Ortmann (1995:381) stresses the wording of design-oriented approaches can, and is likely to, influence their diffusion, and among practitioners the word *sociotechnical* may have gotten connotations that do not fit these approaches' original intentions and content, yet are widely shared and may now function as an impediment to their diffusion. An author aiming at the practitioners' market should take that into account. But such a linguistic argument may not be used as a serious criticism of an academic book.

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