Second Reply to Coelho, Klein, and McClure

WOLFGANG PESENDORFER[*]

CONTINUATION OF THE EXCHANGE BETWEEN COELHO, KLEIN, AND MCCLURE AND WOLFGANG PESENDORFER FROM THE DECEMBER 2004 ISSUE OF *EJW.*

Coelho, Klein, and McClure Comment on Pesendorfer (December 2004)
Pesendorfer Reply (December 2004)
Coelho, Klein, and McClure Rejoinder (April 2005)

　　IN THEIR REJOINDER, COELHO, KLEIN, AND MCCLURE (CKM) mistake colorful descriptions of fashion for an explanation of fashion, confuse signaling with the chest-thumping of individuals who have nothing to signal, and attack innocent simplifying assumption without asking whether changing those assumptions would make a difference to the results.

The phenomenon and what qualifies as an explanation.

　　To clarify the discussion, I briefly restate the phenomena analyzed in my 1995 paper. Fashion houses regularly change their designs. Fashion items are most expensive when they are initially introduced (and hence their design is new) and their price declines over time. New designs do not constitute improvements in product quality, they simply look different.
　　This pattern raises several questions. First, why do consumers pay for (new) designs? Second, why are consumer tastes correlated, that is, why do

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consumers seem to change their taste for a "new look" at the same time? Third, what explains the pattern of prices and why do designers continue to innovate?

My 1995 paper offers a model that addresses those questions. Consumers demand fashion items because they signal some unobservable attribute, such as wealth, education, or personality. A fashion house will introduce a new design at a high price and sell it to those consumers who are willing to pay most. Because design items are durable, the fashion house will lower the price over time and sell it to consumers with a lower willingness to pay. This will reduce the quality of the signal and, therefore, make room for a new design. For the most part, my 1995 paper analyzes a monopoly designer. The last section of the paper contains a brief analysis of a model with competing designers. In their rejoinder, CKM argue that the assumption of a monopoly producer is inappropriate.

In my reply, I cited the fashion house *Prada* as an example of a company that fits the pattern described in my model. The monopoly assumption is a reasonable simplifying assumption because the Prada label affords the company some monopoly power. The number of recognizable brands is limited, and there is an obvious barrier to entry in the (high-end) fashion market: the new entrant must solve a coordination problem and convince consumers to use a new brand as a signaling device. This may require significant advertising costs that form a barrier to entry. Finally, brands are differentiated in what they signal and, therefore, are not perfectly substitutable.

Of course, the monopoly assumption is a stark simplification. Therefore, it is important to consider the effects of competition. For example, one could add a competitive market of imitators. As I argued in my reply, this change to the model would reinforce the mechanism described above, effectively generating faster fashion cycles. My 1995 paper also contains a brief analysis of a model with competing designers.

CKM argue that my model is too complicated and instead offer the following.

> People pay extra for Prada, and Prada continues to innovate and promote new handbags, because people are pleasantly diverted and fascinated by the glamour and glitz of fashion. They buy a new Prada bag to participate in and recreate the pageantry and imagery of fashion. (Coelho et al. 2005, 34-35)

Instead of a theory or an explanation, CKM offer a colorful description of the phenomenon of fashion. Put differently: in CKM's view, fashion plays out the way it does because people like it that way. We usually expect economic theories to do more. My 1995 paper uses standard utility functions that do not display a taste for the "pageantry and imagery of fashion" but nevertheless generate the observed patterns.

CKM cite Adam Smith, who argues that rich people demand large variety of clothing to distinguish themselves, as another simple theory of fashion. However, the quote has little to do with fashion cycles as Smith tries to explain why we observe *variety* in clothing.

Signaling

In their rejoinder, CKM agree with the idea that fashion serves as a signaling device—as long as it is used to signal wealth and no other attribute. Yet, CKM object to the assumption that "types" are unobservable. CKM write:

> There are many ways to signal wealth, from driving a Jaguar, to wearing a Rolex, to living in an upscale neighborhood, and the existence of these alternatives renders unbelievable Pesendorfer's story about the unobservability of type giving rise to society-wide dyadic matching based upon a single design (1995). (Coelho et al. 2005, 34)

Any model that incorporates a signaling role for fashion must assume that there is something to signal, i.e., that something is *unobservable*. In other words, signaling can only occur when there is uncertainty about some attribute of the signaler. Spending resources on "signals" when types are observable amounts to irrational chest-thumping and not signaling. CKM ignore this fact when they criticize the unobservability of types in my model.

CKM suggest that it makes a great difference whether agents signal wealth, human capital, or something else. But, of course, it does not matter what agents want to signal. Information economics has adopted the abstract language of a "type" to express this flexibility. It is not important what a type refers to. What is essential is that the type is unobservable (private information) and that it affects payoffs in the way indicated in the model.

The Prada Handbag

In their rejoinder, CKM dismiss the example of a $665 Prada handbag for two reasons. First, they argue it is sold by a retailer and not by Prada itself—ignoring the fact that Prada sells its products in its own stores at prices very similar to those of Neiman-Marcus. Second, CKM argue that the retailer, Neiman-Marcus, does not count because the firm charges an excessive markup. Conspicuously missing from the rejoinder is evidence that this particular handbag could have been bought for significantly less in 2004. CKM are correct that some Prada items can be bought at various websites for less. But those are not the current designs. The fact that old designs sell at lower prices lends further support to the theory developed in my 1995 paper.

The Demand Function

The inverse demand function is defined as the (marginal) consumer's willingness to pay when the firm supplies a fraction q of the population with the design. CKM express concern about the definition of the demand function at $q=0$. Before discussing this issue it is important to recognize that changing the value of f at the point $q=0$ has absolutely no effect on the analysis in the paper. CKM seem to prefer $f(0)=0$. This change would not alter any part of the analysis. In the paper, $f(0)$ is defined as the limit of $f(q)$ as q goes to zero. This should be interpreted as the consumers' willingness to pay if the firm supplies a measure zero set of agents. Hence, the definition of the demand function is perfectly consistent.

As was pointed out in the paper and in my previous reply, there is always an equilibrium in which no consumer uses the design and therefore the design has no value. This other equilibrium does not imply that "the model collapses". The existence of multiple equilibria is a routine occurrence in many economic models—including in standard competitive models—and has no catastrophic implications. All it means is that the theory does not have a unique prediction.

Matching

CKM repeat their criticism of the matching process. Considering the case where nobody owns the fashionable design, CKM write:

> Consistent with Pesendorfer's matching rule, high types are matched to low types. Each discovers her partner's type and still spends a significant amount of time interacting with the partner . . . . An intelligible (if implausible) interpretation of why each of the high types endures her match with the low-type is that she is compelled to do so. (Coelho et al. 2005, 35)

Put differently, CKM assert that it should be virtually costless to find a correct match if the matching technology were representative of actual (voluntary) social interactions. CKM ignore that individuals devote large resources to finding suitable matches. Most people I know find it quite costly to search for potential partners exactly because it is costly to go on "dates" with the "wrong type". The search for a matching type is further complicated by the incentive of low types to misrepresent their type. Therefore, it is not feasible to ask individuals to truthfully report their type *prior to the interaction*. Agents have to infer the partner's type from the "payoff" of the interaction, for example, from a dinner conversation. This is a significant cost, especially compared to the *per use* cost of a fashionable bag.

REFERENCES

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