Giamarchi and Le Doussal Reply: The Comment [1] reexamines some of the physics of the moving glass introduced in [2]. In [2] we demonstrated that a periodic structure driven along x on a disordered substrate experiences a transverse static pinning force F_y^{stat} along y. A key point [formula (2) of [2]] is that this force, missed in previous studies, originates *only* from the periodicity along y and the uniform density modes along x, i.e., the *smecticlike* modes. It leads to novel glassy effects, the main predictions being the existence of a transverse critical force F_c^y and of static pinned channels of motion, subsequently observed in numerical simulations [3].

Reference [1] claims the following: (i) In addition to F_y^{stat} there is also a u-independent random force $f_d(r)$ generated in the direction of motion. (ii) Due to $f_d(r)$ the elastic theory has to be reconsidered and correlation functions have to be recalculated. (iii) dislocation unbinding will occur for $d \leq 3$. Let us answer specifically to each point.

We do not disagree with (i) that there is an effective random force along x, though this rather subtle question cannot be settled by naive perturbation theory alone. In particular, the argument of time translational invariance of [1] leaves the possibility of u_y dependence and does *not* prove that the random force is u independent. The existence of such a random force needs therefore to be proven carefully through, e.g., an RG calculation [4]. Such a calculation also yields F_c^y and other important physical effects. In particular, we find [4] that a random force is generated along y, a point unnoticed in [1].

Concerning the consequences of such a random force $f_d(r)$ along x within the elastic theory, we disagree with (ii). As mentioned above, the properties of the moving glass rely only on the periodicity along y and are thus, to a large extent, independent of the details of the structure along x, i.e., the behavior of u_x. This is illustrated by the fact that the authors of [1] find "surprisingly" that $f_d(r)$ does not change the transverse correlator $B_y(r)$ obtained in [2] (note that our result is incorrectly quoted since we find a logarithm only in $d = 3$). This is a simple consequence of the related fact that the compression modes are responsible for the moving glass [2]. In fact, setting *formally* $u_x = 0$ leads to the useful equation (3) of [2] describing the transverse physics of the moving glass.

Concerning point (iii), as in the statics [5] the elastic description is only a starting point, and the issue of whether dislocations are generated is a well-known difficult problem. Only a controlled calculation including dislocations could settle this point, but it has not yet been performed. However, qualitative arguments [4] indicate that complete topological order exists at weak disorder or large velocity in $d = 3$ [2] (at variance with [1]), while it disappears in $d = 2$.

More importantly, our picture of pinned channels should remain valid even with dislocations, as long as periodicity along y is maintained, i.e., for a smecticlike structure. Before the channel picture was identified in [2] it was unclear how dislocations affect the moving structure. The existence of channels then *naturally suggests a scenario* [4] by which dislocations will appear: When the periodicity along x is retained, e.g., presumably in $d = 3$ at weak disorder, the channels are coupled along x. Upon increasing disorder or decreasing velocity in $d = 3$, or in $d = 2$, decoupling between channels can occur, reminiscent of static decoupling in a layered geometry [6]. Dislocations are then inserted between the layers, naturally leading to a "flowing smectic" glassy state, recently observed in numerical simulations in $d = 2$ [3]. Indeed, the transverse smectic order is likely to be more stable than topological order along x, because of particle conservation [4]. Decoupling due to the random force advocated in [1] may be one realization of this general scenario. In fact, [2] naturally suggests that transitions from elastic to plastic flow may be studied as ordering transitions in the structure of channels.

In conclusion, since only periodicity in the *transverse* direction is needed and contrarily to the claim of [1], [2] describes correctly the main (transverse) physics of the moving glass and provides the correct starting point to study [1,4] interesting physical extensions such as behavior of u_x, random forces, additional linear and nonlinear terms coming from anharmonicity, channel decoupling, and dislocations.

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