

THE CORRIDOR HYPOTHESIS AND INFLATIONARY REGIMES

Fernando José Cardim de Carvalho

Professor-titular do Instituto de Economia
Universidade Federal do Rio de Janeiro

1. INTRODUCTION: THE "CORRIDOR"

The capitalist world has known after World War II a long period of stability, solid enough to lead academic economists to ask themselves whether the "business cycles had become obsolete".¹ It was largely believed then that macroeconomics had furnished policy-makers with the tools necessary to "fine-tune" the economy allowing them to sustain whatever combination of employment and inflation society could desire. Even Third World countries that were not as a whole living the same prosperity could be led to share the benefits of managed capitalism through external aid and foreign investment.

This image lost its power in the late 60s. Increasing inflation and unemployment, the collapse of Bretton Woods, trade conflicts, slowing growth, volatile interest rates, fiscal imbalances, bankruptcy of social security systems, increasing indebtedness, domestic and international, even political instability, again domestic and international, with the breaking of consensus that had characterized policy-making in most post-depression developed world, all these factors have revived interest in the study of the sources of stability of a decentralized market economy. Macroeconomics, that was once believed to have been reduced to the development of marginally better tools of aggregate management, had again as its "central issue... the extent to which the economy, or at least its market sectors, may properly be regarded as a self-regulating system" (Leijonhqvist, 1981, p. 104).

Critics of capitalism received new audience as theses about the cyclical nature of the system and the fragility of some of its institutional arrange-

ments were offered.² Capitalism was to be seen as an arrangement structurally prone to collapsing or condemned to stagnation. The conflictive core of capitalist social relations, leading to increasingly unmanageable clashes between social groups and to inflationary pressures, the uncertainty that surrounds the forward-looking decisions of economic agents, even the creativity of private agents in devising means to escape social regulation, were all factors that threatened the system and made a disaster a distinct possibility.

These arguments are all doubtless very important. Nevertheless, after almost thirty years of troubles the system has not collapsed. In fact, as in the past, it has shown surprising resilience for a form of social organization market by all those features mentioned above. As noted by Keynes in the 30s:

... it is an outstanding characteristic of the economic system in which we live that, whilst it is subject to severe fluctuations in respect of output and employment, it is not violently unstable. Indeed it seems capable of remaining in a chronic condition of subnormal activity for a considerable period without any marked tendency either towards recovery or towards complete collapse. (Keynes, 1964, p. 249)

It is the perception that the system is more robust than it may look like at first sight but even then that its capacity to endure disorganizing pressures is limited that is the foundation of the concept of “corridor”. Proposed by Leijonhufvud in the 70s, the hypothesis is that “the system is likely to behave differently for large than for moderate displacements from the ‘full-coordination’ time-path” (Leijonhufvud, 1981, p. 109).^{3,4}

Leijonhufvud applies the corridor hypothesis to only one situation: can false trades (in the Hicksian sense) be important enough to prevent the economy from reaching its full-coordination path? False trades give rise to income effects that are a threat to equilibrium because they rotate excess demand functions and can transform the economy’s path into an endless chase of an ever-moving target. Under these circumstances, out-of-equilibrium operation of the system is self-correcting or deviation-amplifying? Leijonhufvud’s answer is: it depends on the size of disequilibrium:

Within some range from the path (referred to as ‘the corridor’ for brevity), the system’s homeostatic mechanisms work well, and deviation-counteract-

ing tendencies increase in strength. Outside that range these tendencies become weaker as the system becomes increasingly subject to ‘effective demand failures’. (Leijonhvfud, 1981, p. 109-10)⁵

The “width of the corridor”, that is, the extension of the range within which the economy is capable of “digesting disequilibrium pressures”, would depend on two factors: 1. the existence of “buffers”, stocks of assets that give some independence to an agent in relation to his current income, when deciding which spending plan to act on, reducing the importance of income effects; 2. the elasticity of expectations of future incomes that influence the agent’s evaluation of wealth (*idem*, p. 122).

As noted by Howitt, the corridor hypothesis demands some non-linearity assumption to make the intensity of the reaction of a shock related to its size (Howitt, 1990, p. 111-2). The existence of (limited) buffer stocks could explain a relatively insensitive reaction of current spending to current income up to the point of exhaustion of liquid reserves. An alternative unexplored argument would be to assume “thresholds of perception”, about which more will be said below. In any case, as Howitt correctly points out, a weakness of Leijonhvfud’s proposition is that, although being a very fertile idea, the corridor was still too vague as a concept (Howitt, 1990, p. 109).

Gray took it one step further adding to it a dimension disregarded by Leijonhvfud and even more by Howitt, whose view is much more restricted to the mainstream. In his view, the hypothesis “conceives of an economy suffering from structural shifts (changing domains)...” (Gray, 1990, p. 272). These “structural shifts”, however, are still limited in scope: “The movement from one domain to another (instability) changes the coefficients of the set of equations without requiring a different set of equations...” (*idem*, p. 272).⁶

Notwithstanding their pioneer character, one may criticize these approaches for the still limited scope with which the notion of corridor is used. On the one hand, still limited attention is given to the process by which “theories” are formed by agents as to the operation of markets and the way they are related to actual expectations and to their revision. In Leijonhvfud’s original contribution and Howitt’s paper this may be due to their attachment to the idea of full-coordination path which embodies the only “correct” theory agents could actually entertain. Gray, in contrast, advances one step further appealing to Keynes’s notion of uncertainty to sug-

gest one mode of expectations adaptation that would be plausible in a depression, but still refrains from taking the discussion deeper.

The second limitation of these approaches is the relative disregard for institutional change and innovation as a result of out-of-corridor behavior. Institutions are social creations intended to attain some desired goals. When these goals are perceived as being out of reach, institutions can be changed. One may redefine the corridor hypothesis to take account of the resilience of institutions themselves in the face of shocks. Of course, in this case, the corridor would refer to cases where the set of equations themselves, not just their coefficients, would be changed. In the rest of this paper, we intend to develop these two dimensions of the corridor hypothesis, firstly, by proposing an alternative representation of the concept and later illustrating it with reference to institutional changes caused by post-war inflation.

2. A RESTATEMENT OF THE CORRIDOR HYPOTHESIS

In this section we will build upon concepts derived from Shackle's model of potential surprise to propose a more explicit treatment of the relation between expectations formation and revision and the corridor hypothesis.⁷

The potential surprise model is offered by Shackle as an alternative to the standard probabilistic approach to decision theory. Its strength resides in its much lower informational requirements when compared with the amount of information necessary to identify probability distribution functions, essential to the standard approach.⁸

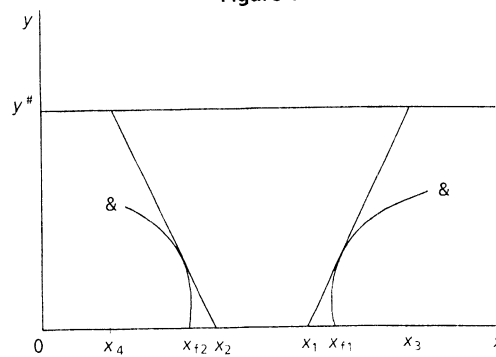
To reach his goals, an agent has to be able to evaluate the environment to identify his choices and to devise his best strategy. Even if the material context could be exhaustively described by the decision-maker he would still have to cope with other agents' choices that are also part of his relevant environment since they work as restrictions over his own choices. If decision is, however, "inspired", to use one of Shackle's expressions, that is, if decision is not entirely explainable by past and current data but is influenced in any degree by "imagination", the environment becomes uncertain for any individual decision-maker. Full coordination is precluded in a decentralized economy by the impossibility of every agent knowing what his peers are planning.

To meet the resulting uncertainty and avoid paralysis, agents form theories about the environment to orient them in their choices. The Shacklean conception of these theories combine an attempt to describe the context with an acknowledgment that not all information is equally important for the decision-maker.

A theory consists primarily of a list of possible outcomes of actions, each associated to a degree of plausibility, represented by the surprise the realization of that outcome would generate in the decision-maker if he could know it at the moment of decision. If we represent the outcomes to an action by x and the degree of potential surprise their realization would give rise by y , we can conceive of three groups of values for the potential surprise: 1. the inner subset, those values between x_1 and x_2 in figure 1, the realization of which would constitute no surprise to the decision-maker, since they are all seen as perfectly possible, that is, with $y = 0$;⁹ 2. outcomes that are seen as imperfectly possible, in the sense that the decision-maker is able to identify obstacles to their realization, although not decisive enough to rule them out; outcomes x_2 to x_4 and x_1 to x_3 are in this category, with $y > 0$; 3. impossible outcomes, those to the left of x_4 and to the right of x_3 , that are associated with maximum potential surprise, $y^\#$, seen as virtually impossible outcomes.

A theory is not directly relevant, as such, however, to the decision-maker, in Shackle's view. Some elements in it have more power to arrest the agent's attention than others. For instance, only the points x_1 and x_2 , the "best" and the "worst" outcomes among those deemed perfectly possible, matter in the inner subset. Among those impossible or imperfectly possible

Figure 1



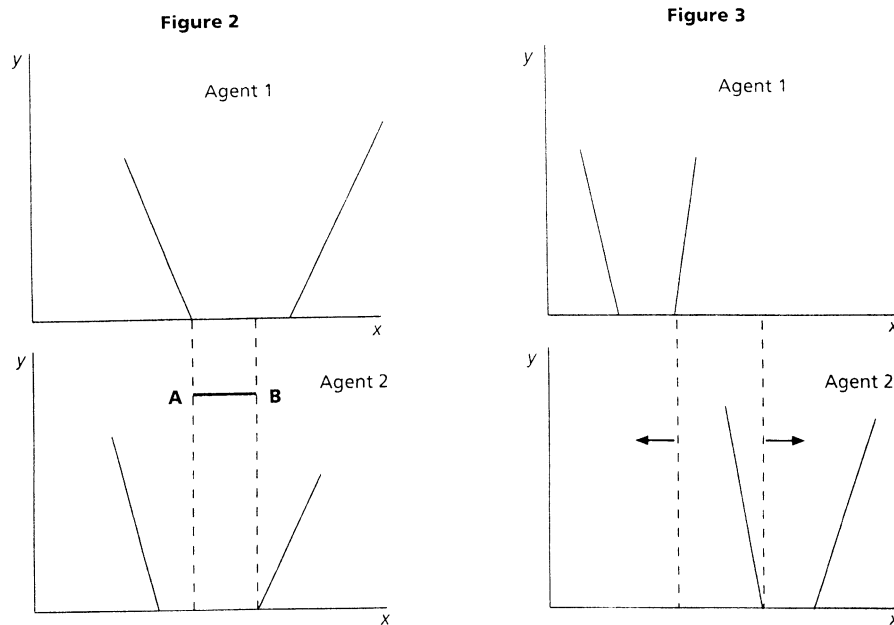
outcomes, some are capable of attracting the attention of the decision-maker for being so good or so bad, that even if they can hardly take place the decision-maker has to allow for them anyway. The attention-arrest functions, combining the nature of the outcome with its plausibility, for given degrees of attractivity is shown in curves γ and δ . The combination of the two types of functions, γ and δ , allows us to identify a set of possible outcomes, x_{f1} and x_{f2} , that although imperfectly possible, as seen by the decision-maker at the moment of decision, are sufficiently plausible and attractive to arrest the agent's attention.

Although Shackle has proposed the scheme to portray exclusively the moment of decision itself, we can extend it to try to approach the process of validation or disappointment of expectations. If no additional knowledge is gained that could lead to the substitution of the theory the agent entertains, it is reasonable to assume that the implementation of a given plan will allow the decision-maker to check his theories and expectations. Of course, if actual outcomes fall in the inner subset, we may assume expectations to be validated and the theory to be confirmed.¹⁰ We may then suppose, barring autonomous changes in knowledge and expectations, that he will keep his theory and will go on acting on the basis of it. If actual outcomes fall between x_1 and x_{f1} or x_2 and x_{f2} , the agent may feel that his theory was fundamentally correct but in need of refocusing. The Hicksian elasticity of expectations could, in this case, be seen as positive but lower than unity. In other words, the agent could learn from these results, in the sense that the information he received can be processed in a coherent scheme. If outcomes fall outside this range or, even worse, if it was not even listed, the decision-maker may take it as a sign that his theory was so defective that it ruled as impossible an outcome that actually happened or, worse, that it did not even conceive what actually happened. We could assume that this would lead the agent to a zone of instability, of search for new theories, with Hicksian elasticity of expectations greater than one. This precludes learning because the agent is left with an isolated piece of information, strongly destructive of his former theories but that can only make sense if the agent is capable of constructing alternative theories.

These properties are important for the proposed restatement of the corridor hypothesis. Let us call a coordinated state a situation in which agent's de-

cisions are consistent among themselves and are thus sustainable, confirming thereby the expectations that led to that decision. A condition for consistency is that the intersection of inner subsets of individual decision-makers be non-empty, defining a set of outcomes that confirm the theories agents entertain. In a two-agent economy, the segment AB in figure 2 is such a non-empty intersection. That segment defines a core to the corridor. Any fluctuation that is contained in that set is absorbed by the economy. In contrast, figure 3 shows a situation where no corridor exists. Any outcome will largely falsify expectations forcing one or both agents to change theories. This economy will not settle to any situation until it approaches the preceding case.

What can we say about the “width” of the corridor in economies such as that represented by figure 2? The existence of corridor is predicated on the coincidence of theories held by agents. These theories can be formed based on past experience. If an economy has behaved in a reasonably ordered way for some time it may help agents to form consistent (converging) theories. Time is thus in an important dimension of this hypothesis since it can increase the weight of evidence associated with certain beliefs that support accepted theories strengthening its resilience and allowing some degree of



testing and elimination of outcomes from the range of possibilities.¹¹ Since a theory is an attribution of degrees of plausibility, institutions and socially accepted rules are also means of discriminating outcomes. A very important influence on this process is the action of government. Credible policies signal future developments to be considered by decision-makers. In general, shared information and experience are stabilizing factors as long as they have been consistent in the past or may be shown to be possibly so in the future. Conversely, the more diffuse or hard to interpret information is, the more likely it becomes that no common inner subset will arise and the economy will live through turbulence. The corridor will be thin or non-existent and coordination failures will prevail.

We should find some fuzzy behavior near the borders of the corridor. Being the intersection of individual inner subsets the corridor will have in the neighborhood of its borders outcomes that may represent for some individuals results that either require refocusing or complete overhauling of their theories. If actual outcomes mean for a majority of individuals that theories were completely falsified, the economy will be taken to a zone of turbulence and crisis. If it is the case that a majority of individuals find these outcomes to require only refocusing, the economy can be taken to a new corridor through a more or less smooth path. Again, the key factor is the degree of coincidence of theories: the larger the dispersion of beliefs, the more likely it is that outcomes that may be seen as plausible by some may represent a significant surprise to others.

For a given degree of convergence, assuming that the social inner subset is non-empty, as it is the essence of the corridor hypothesis, the effect of a disturbance on the economy will depend on the size of the shock. The size of the shock is important because deviations from the norm may be contained, if the shock is not too large, either into the inner subset or into that region in which agents feel that refocusing rather than overhauling of theories is sufficient. In this case, a smooth transition instead of a crisis may ensue, defining a new common inner subset in terms of which coordination may again be achieved. Larger shocks, on the other hand, may falsify long held theories forcing agents to look for new ones in an environment of heightened uncertainty that makes it less likely to arise any significant convergence of expectations.

As we saw, the corridor hypothesis can be enlarged to deal not only with the material conditions necessary for agents to persist with some planned behavior in face of disturbances but also with the will to proceed in that way. But we suggested that the hypothesis could also be generalized to deal with problems that involve the change of equations themselves and not only their coefficients. It can be used to examine the resilience of economic institutions. In the final section we will try to show it through an examination of diverse inflation scenarios.

3. INFLATION AND THE CORRIDOR

In this section we draw on Max Weber and Keynes to build upon the view of modern capitalism as a system based on the freedom of the individual to pursue activities selected according to a calculation of their financial advantages. Decision-makers need a yardstick to measure prospective costs and benefits of each possible activity and to compare them. The attempt to reduce the uncertainties of the future lead them to try to control at least some of the circumstances that will affect the implementation of the chosen plan by graphing those costs and benefits into contracts, making of the unit of measurement a money-of-account.

The importance of contracts in Keynes's view can hardly be exaggerated. In his words: "The introduction of a money, in terms of which loans and contracts with a time element can be expressed, is what really changes the economic status of a primitive society" (CWJMK, 28, p. 255).

The need for a stable money-of-account as the foundation for the system of contracts was stressed by Keynes in many occasions.¹² In his Tract on Monetary Reform, Keynes stressed that modern capitalist economies could grow fast as they did because financial contacts allowed entrepreneurs to draw on the savings of the whole society. Among modern Keynesian economists, the importance of contracts denominated in money has been consistently argued by Davidson.¹³

A key decision to be made by economic agents in such a type of economy is the prices to be charged for the goods of services one is to sell to other agents. The price a good carries represents in fact a bid its owner makes to the social product. The more he can obtain for what he has to sell the larger is

the share of social income he will be able to achieve. Each agent must form an idea of a "fair" or sustainable price combining information about the costs to be incurred in obtaining them, the prices of other goods, the features of demand functions, etc. Let us call the "pricing regime" the set of rules and behaviors that guide those evaluations and the resulting pricing decisions.

The existence of a pricing regime represents a real benefit to traders since it contains trading rules, terms of contracting, the definition of units of measurement of values, institutions that define legitimate commitments and institutions that enforce them, etc. Because of learning and of trust, we can expect that the longer a pricing regime is accepted the more efficient it becomes. Because it excludes some kinds of behaviors and sanctions others, a pricing regime will be useful and accepted as long as circumstances do not make the accepted behaviors inadequate or stimulate the adoption of forbidden relationships. We will define a corridor of stability for a given pricing regime the set of circumstances that do not threaten its continued survival. It is in this sense that out-of-corridor paths will represent a "change in equations" and not only of the coefficients.

We propose to define two pricing regimes and a zone of deep instability, which we will call hyperinflation. We can then conceive of three corridors: from one pricing regime to the other, and from each one of them to a hyperinflation.

The first pricing regime to consider will be called a stable-price regime.¹⁴ Its main feature is the existence of only money-of-account to denominate all contracts, that are to be liquidated by the delivery of legal tender or its perfect substitutes. All agents make their calculations in the money-of-account, both those with contractually-fixed incomes and flow-supply-price setters. Price relativities are translated into money price levels and price expectations are very inelastic with respect to current price changes. Price changes are seen as temporary (and reversible) or as "caused by acts of God", such as wars, weather conditions, but also as innovations, that because of being unpredictable cannot be defended against by contracts or any other device.

The possibility of translating price relativities into money prices makes of this regime a very efficient price-setting device, since when a money-price system is established and known each individual price is capable of

synthesizing information about the whole system. The “real” meaning of a money value is immediately recognized by each and every agent without need to explicitly ascertaining them. Dealings are made, then, directly in terms of this unit that is able to transmit meaningful messages to all agents.

The corridor marking the limits of tolerance of such a regime has historically been very wide. A stable-price regime has shown itself to be exceedingly resilient, able to absorb heavy pressures. High rates of inflation causing ample disturbances in the sets of price relativities have been absorbed by these regimes even under unexpected conditions. Bresciani-Turroni (1937) tells us of bullish speculation with the German mark as late as 1922, when the hyperinflation was all but installed. It took the occupation of the Ruhr to serve as the trigger that finally led the economy out of the corridor to a hyperinflationary explosion. Many other countries have suffered heavy inflationary pressures, specially after World War II, without changing their basic pricing rules.

The exceedingly ample width of the corridor seems to be determined by many factors. Firstly, we already mentioned the great informational advantages of having a common unit of measurement of value leads agents to deeply resist abandoning the habit of treating the purchasing power of money as fundamentally stable. Another influential factor is the explicit, even if not more than formal, adherence by monetary authorities to the goal of preserving a stable price level. Thirdly, even when some inflationary tendency is acknowledged to persist, if it is low enough not to preclude calculation of future costs and benefits, a measure of normality can be preserved allowing the economy to function. As Jackson, Wilkinson and Turner (1975) have argued, if growth is maintained, the income redistribution caused by unexpected movements in relative prices that usually takes place with inflation affects mainly increments, not absolute incomes, containing the damages that could lead to out-of-corridor reactions. Higher inflation can take the economy out of the corridor either directly, because relative price dispersion is deepened the higher the rate of increase in prices, causing some heavy losses to emerge that force some agents to react, or indirectly, because higher uncertainty caused by higher relative price dispersion may stimulate agents to buy financial assets rather than risky investment goods, causing stagnation.

The width of the corridor in this case has been shown not only by the amount of pressure and disequilibria it can take but also by the violence with which out-of-corridor phenomena have occurred in countries in which the belief on stability had been greater. In these experiences, among which the great German hyperinflation seems to be the emblematic case, the institutions of a stable-price regime were abandoned only when pressures accumulated to such an extent that the realization that no way back to previous normality was feasible could only lead to an explosion of panic and disintegration. The economy remains for some time in an area of complete instability, with inconsistent decisions and behaviors being adopted until the recovery of a notion of price relativities is allowed by the discovery of another money-of-account. The memory of stability, rooted in a long experience with the stable-price regime, allied to the adoption of a new money-of-account, usually a foreign money, like the US dollar, seemed to have allowed a very quick construction of a new corridor within which decisions could again be coordinated.

The fall of a stable-price regime, however, does not have to lead to hyperinflation. If price expectations are not very inelastic and inflationary pressures are not so high as to become explosively unmanageable, the economy may have the time to adapt to new institutions. In this case, leaving the stable-price corridor may mean to move to another corridor instead of moving into an instability zone.¹⁵ The lack of solid institutions to coordinate expectations around a core of key set of stable prices may lead the population to accept more easily the need to think in terms of changing prices. If these countries are also going through some kind of structural economic change or political instability, uncertainty may be very high anyway, enough to make useless to try to think of stable price relativities. In this case, inflation can be seen as "normal" and the corridor around the stable-price regime becomes narrower than in the preceding case.

Even "normal" inflation, however, can reach levels that cannot be handled within the stable-price rules. The inadequacy of these rules is quickly realized when price expectations are elastic and the need for new institutions and rules may be perceived before pressures accumulate so much as to cause an explosion. This has been the case of countries like Brazil (Carvalho, 1993).

A new pricing regime is established when these new rules are finally adopted. Fundamentally, it consists in the creation of alternative moneys-of-account capable of containing the information that the common monetary unit is no longer carrying. As it is well known, inflation is damaging because it becomes an independent source of change in price relativities. High inflation rates mean the possibility of great relative gains or losses for reasons that have nothing to do with efficiency, competitiveness, ability to calculate, etc., and that are important enough to supersede any other cause of gain or loss. Money values lose their power to inform about future possibilities, so money forward contracts are no longer capable of controlling, no matter how partially, the future. A High Inflation Regime is defined then by the adoption of multiple moneys-of-account for economic calculation. In principle, each group of agents with homogeneous interests could be able to determine a unit of account capable of informing about its goals in “real” terms, that is, in terms of a basket of goods that represents those goals (Carvalho, 1992b, ch. 11). In practice, only a small set of new units have actually been adopted.

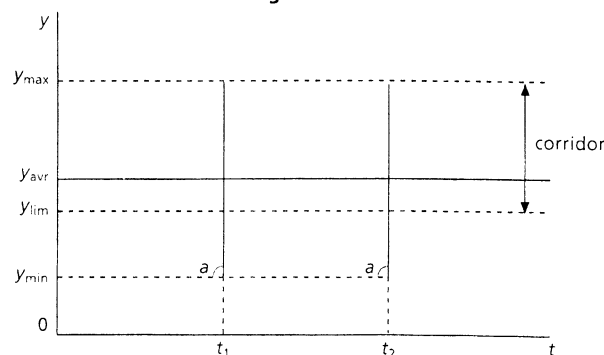
For our purposes it is sufficient to identify two different modes of price formation to define the High Inflation Regime. On the one hand, contractually-fixed incomes, such as wages and salaries, rents, some financial contracts, etc., are indexed to the observed prices of a given basket of goods. These obligations are discharged by money payments, calculated according to the variations observed in a given price level for a given past period. In other words, contractual incomes are indexed to past inflation. Flow supply prices, on the other hand, are indexed to expected future prices of labor and means of production each firm needs for its production activities (Frenkel, 1979). Flow supply prices are, then, indexed to future (expected) inflation.¹⁶

Indexation to past inflation cannot guarantee stable real incomes in the face of continuing inflation. It is a rule to reconstitute money values at given time intervals but it is unable to prevent erosion of real incomes in between the dates of reconstitution. As we see in figure 4, average real incomes are determined by the mechanisms of indexation, that set y_{\max} and of the inflation rate that determines the rate of erosion of real incomes in the period, measured by angle “a”.¹⁷ Indexation, however, in a situation of permanently high inflation offers two advantages to income-earners: on the one

hand, it saves them (and the economy as a whole) the costs and uncertainties of conflicts that would become much more frequent under increasing prices: in addition, it represents the social acknowledgment of a “right” to a given amount of real income, legitimizing their claims, even if society is not really able to attend them. The adherence to rules of indexation depends then on the comparison between gains and losses and, thus, of current rates of inflation that determine angle a and actual real incomes in figure 4. We may define a partial corridor to contractual income-earners defined by the rate of inflation and the consequent real income loss that can be suffered by these agents that is still seen as a “fair price” to be paid for the gains we mentioned above. If y_{lim} is the minimum average income that can be accepted by income-earners to keep their allegiance to the system, the corridor is then the set of values of y between y_{max} and y_{lim} in figure 4.

Flow supply price setters are not free of problems either. They have to anticipate future rates of inflation so as to be able to charge on current prices the cost of renewing their activities. The mere recuperation of values spent is not enough to do it, so firms have to charge their current costs plus an allowance for the expected increase in costs they are going to suffer until the next time they hire labor and buy means of production. In sum, current prices (or current mark ups) carry with them the expectation about future inflation. The coordination problem, that is, to keep up with “normal” price relativities, is made more difficult under these conditions because it adds to a possibly well and widely known structure of relativities a subjective element that are the inflation expectations of price setters. Entrepre-

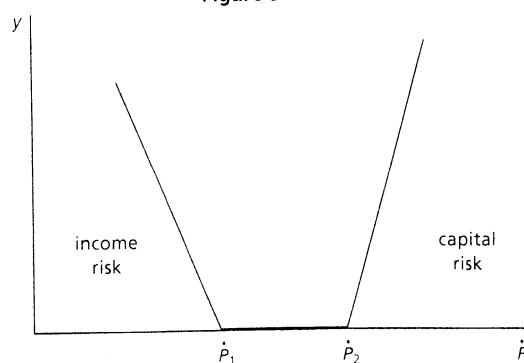
Figure 4



neers have then to set their prices, including their inflationary expectations, subject to two risks: an income risk, of setting too high a price that will make the good relatively more expensive than its competitors and will cause the firm's revenues to fall; a capital risk, for setting too low a price that will prevent the firm from receiving revenues sufficient to renew the production process (Canitrot, 1975). Actual losses will be assessed *a posteriori*, depending on observed inflation rates. Again, a partial corridor may be defined in terms of current inflation rates, as in figure 5, that shows the actual rates that would not cause income or capital losses high enough to force firms to different forms of behavior.

An acceleration of inflation can, thus, take the economy out of the corridor into a zone where these contractual and pricing rules and behaviors cease to be accepted both by causing higher losses to contractually-fixed income-earners than they are willing to accept and because it increases capital risks, threatening the solvency of firms. The combination of these two partial corridors determine a much narrower overall corridor than we expect to find in a stable-price regime because it is determined by the space of coordination between those two groups, which are, as we saw, by themselves, much narrower than what we would find in a stable economy. Accelerating inflation tends to make capital losses more likely than income losses to firms. Therefore, avoiding capital risks become relatively more pressing even at the cost of temporary losses in sales revenues.¹⁸ This means that firms will tend to mark up their prices according to their highest inflation expectations. In terms of figure 6, firms would set their prices near the right

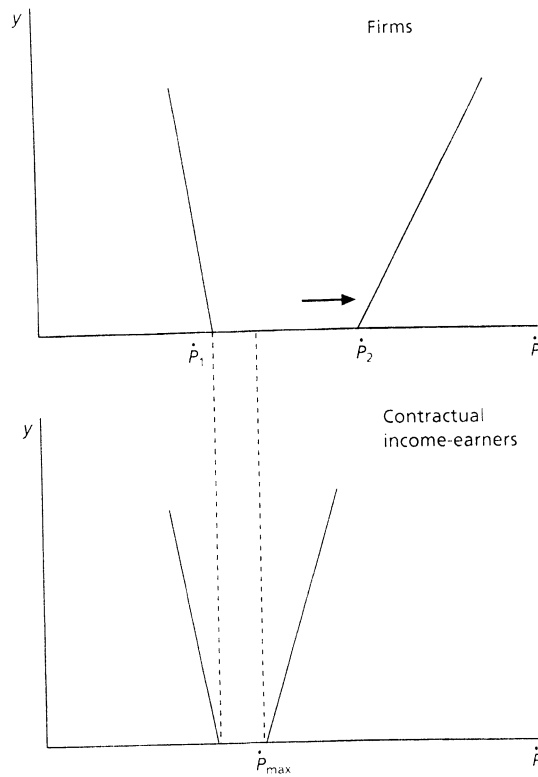
Figure 5



side limit of their inner subset. As a consequence, current inflation tends to actually accelerate, reducing current real value of contractual incomes, pushing them closer to y_{lim} in figure 4. Eventually, inflation may reach rates that while defending firms against perceived capital risks may be beyond what is acceptable to contractual income earners, as being to the right of p_{max} (the rate of inflation associated with y_{lim}). Contractual income-earners will then react searching for alternative ways to defend their share and eventually the economy may slide down to a hyperinflation.

The corridor of a High Inflation Regime is narrower than in a stable-price regime but it may be strengthened by some external stabilizers. On the one hand, acceleration of inflation increases uncertainty, depressing long-term activities, such as productive investments, thereby reducing aggregate demand. The decrease in income may increase income risks, stimulating firms to set their prices more to the left in their inner subset or contractual

Figure 6



income-earners to adjust their y_{lim} downwards in the face of the possibility of unemployment. In addition, monetary and fiscal policy may be used to try to contain inflationary pressures in the common inner subset for the two groups, preserving the rules of the game. Some external instabilizing factors also operate. Firstly, one has to consider the effect of high inflation on public finance, which is generally acknowledged to be negative under high inflation rates. In addition, money tends to become endogenous in such systems, creating difficulties for monetary management. The transition to a hyperinflation, that is, to out-of-corridor zones, depends thus on the complex interactions of these forces.

4. CONCLUSION

Leijonhufud, Howitt and Gray have proposed corridor concepts in terms of limits to the spending capabilities of agents that could make them independent of current economic conditions. They also mention the influence of changes in expectations but for various reasons lesser attention is given to this factor. In this paper we propose a scheme to treat expectations formation in the corridor and outside it. We suggest that a corridor effect may be constructed based on the formation of common beliefs, conventions and theories for action built on shared information and experience. The existence of a common core of theories in this sense allows agents to coordinate their actions and reach some degree of consistency. The space of possible coordination is then defined as a corridor. We show then that this scheme can be used to analyze not only changes in the intensity of reactions to disturbances, but even of institutions. We illustrate the point by developing the concept of pricing regimes under different assumptions made by agents as to overall price stability.

NOTES

1. The theme of a conference the proceedings of which were edited by M. Bronfenbrenner in an influential volume published under the same name in the 60s.
2. In fact, not only critics of capitalism but even its apologists have rediscovered its cyclical character, although the theses of these schools are directed mainly to emphasize the temporary and fundamentally superficial nature of fluctuations and the uselessness of

political intervention to try to smooth them out. See, for instance, Lucas, 1981, and, for an older approach, Friedman and Schwartz, 1963.

3. "... 'full coordination' for our purposes means simply that existing markets clear; it does not mean 'efficient allocation'" (Leijonhvfud, 1981, p. 105).
4. Leijonhvfud warns that "the term 'stability' is also better avoided because of its firm associations with certain classes of models. What should concern us is the dynamic behavior of actual economics (*sic*) — and we do not want to prejudge how that behavior is most appropriately to be modeled" (Leijonhvfud, 1981, p. 105n). Howitt, however, disregards the warning stating that "the basic notion of the corridor is that, although the economic system usually exhibits desirable stability properties, there are limits to the size of shock that it is capable of handling. Formally, the system is locally stable but globally unstable" (Howitt, 1990, p. 107).
5. "This failure of the markets to transmit messages about desired transactions from one side to the other is what we mean by the phrase 'effective demand failure'" (Leijonhvfud, 1981, p. 119).
6. Actually, it is not clear whether Gray shares this view of the corridor hypothesis, that he attributes to Leijonhvfud. He lists some long-lasting influences a depression may have on the economy that could make a return to the *status quo ante* impossible (p. 281). However, he also conceded that the survival of the "set of equations" defining the system for Leijonhvfud was subject to the proviso that "the effects of any changes in institutions of behavior which will have occurred during the period of depression" (p. 272) should be taken into consideration, "depression" being the out-of-corridor situation studied by Gray. In fact, even the change of coefficients could be dispensed with if, as already mentioned, we consider non-linear systems.
7. A detailed discussion of a corridor hypothesis represented through Shacklean concepts is given in Carvalho, 1992.
8. The contrast between the two notions of uncertainty is discussed in Carvalho, 1992b, ch. 4.
9. Given that potential surprise is not distributive, this does not mean that the probabilities of outcomes x_1 to x_2 should add to one. The addition of other outcomes to the inner subset would not alter their degree of plausibility in this scheme. Probabilities are simply another matter.
10. Confirmation, as falsification, is taken here in the subjective sense that the agent sees no reason to alter his theories. We are not assuming that the agent is objectively correct, let alone that he correctly understands why his expectations were validated.
11. In contrast, Gray identifies some important ways in which time can play against stability. The most important way is the accumulation of disequilibria that can eventually erode the endogenous defenses of the system. A case in point is Minsky's law of increasing financial fragility.
12. See, e.g., CWJMK, IV; XIX, p. 117; XXVIII, p. 257.
13. See, for instance, Davidson (1978a and 1978b).

14. Since, as will be seen below, this regime actually admits some degree of inflationary pressure, we could call it as well an “equilibrium inflation” regime, inspired by the characterization suggested by Jackson, Wilkinson and Turner (1975). We opted for stable-price regime to emphasize that one is approaching institutions that were built on the assumption of stable prices, even though it can resist the continuance of some inflation.
15. This may be the case of new countries, like Israel, or older nations in which political or economic instabilities may have precluded a strong “convention of stability” from being established, like Brazil or other Latin American countries.
16. A detailed examination of the characteristics of a High Inflation Regime is offered in Carvalho, 1992b, ch. 11, and Carvalho, 1993.
17. It is a common mistake in the literature to consider “instantaneous” indexation, forgetting that prices have to be observed first, then indices have to be calculated, and contractual rules as to timing of compensation have to be followed before a payment is made. For the mistaken view, see, e.g., Gordon, 1983, and Benassy, 1983. For a rare approach that avoids this mistake, see Jackson, Turner and Wilkinson, 1975.
18. One should keep in mind that with high and accelerating inflation many buyers become unable to effectively recognize when a given seller is charging higher prices when compared to his competitors, something which reduces income risks.

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