



## Shaping the urban space with regard to tactical objectives

military-Earth thinking notebook

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**It is customary for the chief to think according to the maxim "The field commands". Captain (TA) Grégory Ollier considers that, if the development of the land is of military interest acquired in all areas of action, extending it by transforming the town planning of the city from the tactical level is the way to take the initiative.**

The chief is accustomed to thinking according to the maxim: "The land rules". This conception of space makes sense especially in open terrain because it is difficult to move a mountain or a river on the time scale of tactical level military actions. However, armed conflicts are now increasingly taking place in urbanised areas. This environment is specific and has among other characteristics that it is entirely built by man, for man and on a time scale that is his own. Would it not therefore become possible to purposefully control the terrain of cities in the particular context of high-intensity conflicts?

Ordering the land would be tantamount to shaping it, i.e. working it to make it take on a form that would be militarily advantageous. But in this kind of enterprise, significant constraints arise. A city, which would not be totally destroyed by the fighting, is made up of structural works requiring technical know-how and heavy means. Tactical units are generally poorly equipped. So, the problem of this shaping seems to be based more on the logic of means than on the logic of end.

If land development is of military interest in all areas of action, extending it by transforming the town planning of the city from the tactical level is a good way to take the initiative in that it contributes to hiding one's will. It is also possible to do so at a lower cost because it is more a matter of will than of possibility, of inventiveness than of capacity.

The difference between land development and land transformation varies depending on whether the land is open or urban. Moreover, in a battle, the initial challenge is usually to take and keep the initiative: the transformation of the land can largely contribute to this. To do this in urban areas, simple processes that are affordable to combat units but

require a different intellectual approach are sufficient.

The confrontation of wills - the essence of war according to Clausewitz - if it is expressed through the fire of combat, it is also expressed in the relationship of the soldier to the terrain and the action he has on it to impose his will on the enemy. It can then be a question of land development or transformation.

Indeed, each military action is generally preceded by a period of preparation of the ground, the objective of which is, for the defender, to reduce the impact of the enemy's fire and mobility in the area of action considered. The defender therefore works upstream of the action while the attacker must make an effort during the action and most often by taking hits. The battles of the industrial era are provided as examples: the development of the Normandy beaches by the German army, the embossing of Serbian tanks against NATO forces entering Kosovo in 1999, or more generally the extension of the know-how of the poliorcetics[1] to the war of encounter (trenches, earth forts, slaughtered, redoubts, parapets implemented since the Civil War) are all illustrations that the development of the terrain is a constant.

Armed forces can go much further than the indispensable development of the terrain by changing its physiognomy. It would then be a total or partial transformation of an area in order to have an initial strategic advantage. It is so important by its very nature that it necessarily implies the strategic will to implement heavy and specific means over an equally important time scale. The discovery of the "tunnels of aggression" by south Korea under the border with north Korea is an example of the transformation of the terrain intended to take the initiative in the event of a new confrontation.

However, the difference between the development and transformation of the land in an urbanized area is quite different. Cities are built by man, for man, on a time scale appropriate to human action. The efforts that need to be made to change urban planning are therefore less important than those that need to be made to change the physiognomy of an open terrain, in terms of time, capacity and human resources. If it is not possible to move a pass, a ridge line or a talweg with the means available in a tactical unit, it becomes possible at least to destroy constructions, or even modify them with the means available in combat units.

The transformation of terrain, a strategic ambition in open terrain, thus becomes possible on a tactical scale in urban areas. Few means are to be implemented for a potentially significant military gain.

Consequently, the conclusions of the terrain study would not simply be a preliminary to the choice of mode of action, but the means of deciding how it could be ordered in the field in favour of a mode of action. An adaptation of tactical thinking and the will is needed to turn the urban area to its full advantage and take the initiative more easily.

Indeed, accepting the terrain as it is means undergoing the discontinuity of the environment that dislocates and isolates the elementary units, following the battle plan and throwing oneself head-on into a meeting combat for which the majority of operational functions are not adequate. Even cavalry loses all or part of its abilities in a compartmentalized environment. Beyond the many design and organization errors during the first Grozny offensive, the Russian army relied on its strength (mechanized units, saturation artillery...) [2] by throwing its armor on the axes where it was expected. It suffered the loss of nearly 300 tanks and infantry combat vehicles and 1,000 men in the

night of 31 December 1994 against Chechens who had solidly prepared their zone defence. The Russians accepted the constraints of the terrain by allowing it to impose itself on the manoeuvre plan.

This is why an appropriate intellectual approach is necessary, since it is not enough to develop the terrain in an urban area: shaping the urban area by modifying its structure should give an additional and complementary advantage to the development. Above all, therefore, it is necessary to change the way in which it is understood. Thus, attacking a city structured in a checkerboard pattern like Ortona<sup>[3]</sup> would not necessarily mean attacking it along the axes naturally proposed by the layout of avenues and perpendicular streets, as the Canadian army did in 1943. A biased axis of attack refusing the natural channelling would allow the attacker to impose his manoeuvre more easily than by attacking where the defender saw the defence as obvious. The principle of reverse geometry conceptualized by the Israeli army makes it possible to implement such a mode of action. "We have interpreted the alley as a place where it is forbidden to pass. That is why we have chosen the method that consists in passing through the walls" <sup>[4]</sup>. <sup>[4]</sup> In this case, the Israeli army refuses the conventional reading of the terrain and, in a way, rebates the maps of the terrain analysis. Urbanism is less of a constraint for manoeuvre, provided that the "militarization of urbanism" is added imperatively.

As a result, an entity facing an adversary who rethinks urban planning would have more difficulty understanding its manoeuvre, whatever the style of action. It would therefore react more quickly, a state conducive to the loss of initiative. This would probably have an impact on the outcome of the confrontation in that it allows one side to gain a double advantage over the other: tactical and moral. The result would be a destabilization of the entity which, thus surprised, would undoubtedly have difficulty in adapting even before having reached a climax (commitment of its reserved means). The defensive modes of action implemented by Hezbollah in southern Lebanon in 2006 partly illustrate this approach. The militiamen transformed the terrain to provide them with a capacity for manoeuvre thanks to the underground tunnels dug secretly, at Bint Jbeil, Maroun al-Ras and in the confined area of Wadi Salouqi. These mobility corridors will surprise Israeli units.

The urban area is therefore a special environment that can be transformed at the tactical level to take the initiative. For this, it is above all necessary to change the intellectual approach that one can have by studying the terrain and, above all, to show adaptation and initiative.

The shaping of the terrain would then be the declination of strategic audacity at the tactical level, made possible by the will to command on the ground using all the means available in combat units. This shaping would comprise several interdependent fields, but the principle of thinking would be simple: to break the correlation between map and terrain to create mobility and counter-mobility where they are initially not permitted by civilian urbanization.

### **Transforming to camouflage, move, constrain and deceive**

Breaking the map-terrain correlation would be tantamount to reversing the urbanistic characteristics of the area of engagement. In other words, it would mean partitioning the open spaces and opening up the partitioned spaces, regardless of the style of action. Nearly all the means available in tactical units can be used to achieve this, but it would

probably require a little more effort. This principle would thus make it possible to open up spaces of mobility in the buildings for infantry, but also for tanks (as the Israeli army does) and to close the most obvious axes of attack or counter-attack (in preparation or during action). Camouflage of units would be facilitated (facing drones, in the intervisibility spaces identified on the map ...). These corridors of mobility would be chosen where it is difficult for the opponent to anticipate them. This is intuitively what the fighters of the Islamic state, in the extension of Hezbollah's modes of action, have achieved, notably in Mosul or Aleppo, by digging tunnels and mouseholes. This is not a question of stopping at the available engineer capacity in the units. Engineer manpower should be reserved exclusively where manpower with a mass and the capacity to breach the machines are impotent. The simple breaking and entering batches available down to the lowest echelons may be sufficient to open the interior walls of the most modern constructions. The infantry is then permanently concerned with finding, creating and setting up firing posts for tanks. Hit-and-go and window shots, which increase the effectiveness of tanks and armour and reduce the level of encounter combat, are then favoured. At the same time, all dressing tricks are good. Removable masks[5] (sheets, tarpaulins...) that can be carried or retrieved on the field can be stretched between constructions. These masks will make it possible to change the sectors of intervisibility in the second dimension but also in the third dimension (masks facing the floors, facing the drones...). They can be placed in the immediate extension of the smoke triggered by the fighters during their progression, or as soon as a defensive device is prepared. Some of them can also be used as a trompe-l'oeil to mislead the opponent, especially when he is observing by imagery from the air for example. This dressing can also be thermal or athermic. Research and development is at the origin of some innovations in this field [6]. 6] However, the most common athermic mask remains the survival blanket, which, coupled with a camouflage net, can give good results. Finally, if it cannot partition the terrain or as a complement, it can be dressed with decoys (false silhouettes, simulated armoured vehicles or parts of armoured vehicles cleverly arranged...). Where it would become difficult to camouflage certain thermal sources, it might be easier to overload the landscape with them.

## The will to implement

The realisation of this transformation work is certainly more a matter of will and ingenuity than of means, as stone remains fragile in the face of man's will. It is therefore a question of exploiting the capacity for initiative and "manpower" available in a combat unit. Some actions will notably require the allocation of specific tasks to dedicated units: an engagement support section can be tasked to infiltrate to dispose of masks in an area of future action or decoys in an adjacent sector to support a diversionary action. While land development is likely to be an engineering expertise, the transformation and militarization of urban planning is a general tactic. Digging into bulkheads does not require any special qualifications. This implies that when the unit is experiencing dead time, characteristic of the leaders' moments of reflection, subordinates are busy working the terrain, for their armour, logistics or the next echelons. One of the consequences would seem to be the slowing down of the general rhythm of the manoeuvre if a mode of action is traced out that is free from the terrain. However, this pace would actually be increased, from the point of view of the sequence of successive actions, by relying on the fact that the latter would be more difficult to thwart. There will therefore be a willingness, from the end of the chain of command, to serve a scheme of manoeuvre fully directed on the centre of gravity. The quality of the initial intelligence on the enemy and on the ground is undoubtedly the predominant success factor, as is the consideration and location of the population. Finally, these implementations must nevertheless satisfy the principle of simplicity at the risk of making coordination measures more cumbersome.



## Transforming the field: an advantage today that will be different tomorrow

Beyond what history and current events can inspire us in the field of combat in urban areas, military issues will be concerned by the evolutions that urban planning [7] is bound to undergo in many fields (architectural, cultural, cyber...). These evolutions will not be without impact tomorrow. It is likely that mobility in cities is constantly evolving, initially with the advent of civilian UAVs, but also with the probable investment of the third dimension by vehicles for everyday use. In this field, civilian innovations are generally ahead of military equipment plans. The action of the "weak" in asymmetric conflicts is often favoured. In addition, new concepts of cities are expected: like the artificial islands that are already very real, floating, flying or even underground or even spatial cities are credible concepts. These urban environments of tomorrow will probably have among other characteristics to increase the equalizing power of the city and will most probably include a fourth dimension: that of urban cyberspace specific to the connected city. The transformation of urban planning will then be a different notion. The mastery of cyberspace will be a prerequisite for any physical military action in such a city.

**In conclusion**, the boundary between planning and transformation of the action zone is different depending on the military level considered. It would seem that the more the terrain is partitioned, the more transformations are possible at the tactical levels, with a few exceptions. This urban transformation for military purposes would therefore be tantamount to closing the open spaces to and opening up the closed ones. The desire to destructure urban planning by breaking the map-terrain correlation would offer a sure way of gaining an advantage and preserving one's own forces. From then on, the analysis of the terrain would no longer focus entirely on the constraints induced by the environment, but on how to command the terrain. It would become possible to apply a tactical scheme more conducive to surprise, creating mobility (or counter-mobility) where it is not possible at first sight.

Moreover, mobility in urban areas does not stop at the material aspects as discussed here. Immaterial mobility (digital data flows, radio...) also invites us to look at the map with a specific intellectual approach.

1) Technique of the siege of cities

[2] «The ultimate battlefield2] », Colonel Pierre Santoni, Commander Frédéric Chamaud, Pierre de Taillac publishing house, pages 30 and following. The Russian army had planned this offensive more like a police operation (design error) and with the means on board: many VCI were without on-board infantry combat groups (organizational error).

3) Port city on the Adriatic Sea where the Canadian army confronted the Nazis in 1943.

4) Brigadier General Aviv Kochavi, Israeli army, quoted in "Through the Walls", Eyal Weizman, La fabrique, p41.

5) This kind of mask would be quickly destroyed by direct fire. To make them last, it would be necessary to double or even triple them, immediately or over time.

6) A British company is at the origin of the ADAPTIV system, which can be summed up as a cloak of invisibility capable of melting a tank into the thermal landscape and even of reproducing the thermal effect of the fire. The ADAPTIV system can be summed up as a cloak of invisibility capable of melting a tank into the thermal landscape and even representing the thermal signature of an animal or displaying shapes calibrated to a particular frequency to facilitate identification and recognition measures between friends.

71 Report "Mobility in urban areas (horizon 2035)" by Jean-Jacques Patry, General (2S) Bruno Lassale and Col (CR) Pascal Nebois, Fondation pour la recherche stratégique.

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