

## Dear Ladies and Gentleman,

I am pleased to invite you to a short trip to Switzerland. I want to start at a famous place - for lot's of tourists but also for Swiss children: *Swiss Miniature*, a place in Switzerland nearby the Dam of Melide ([www.swissminiatur.ch](http://www.swissminiatur.ch)).

*Swiss Miniature* is a place with no traffic trouble. Make yourself comfortable and enjoy this phenomenon, this perfect paradise. No streets, no traffic. A symbol of Switzerland? Really?

The crud reality shows up when we look further. *Suisse Miniature* is located next to the highway and the most important railway through Switzerland at the Dam of Melide. Most of the north/south traffic moves here through Switzerland.

77.000 vehicles and a (for me) unknown number of trains with passengers and goods cross the Dam day after day. The noise, the dust and air pollution in the villages near the Dam of Melide is unbearable.



Pictures: The idyllic village 'Bissone' on the other side of the Dam – all this just some meters away of the little paradise *Swiss Miniature*.

The idyllic model *Swiss Miniature* is for me, in another way, a symbol for the traffic future in Switzerland. There are no traffic accidents! This is also a target the Swiss Government had been trying to reach for a time, already.

But: the starting point is completely different. In *Swiss Miniature* there are no streets and no traffic and thus, there are no accidents. In real Switzerland there are barely children outdoors on the streets and this keeps the numbers of traffic casualties with children involved down.

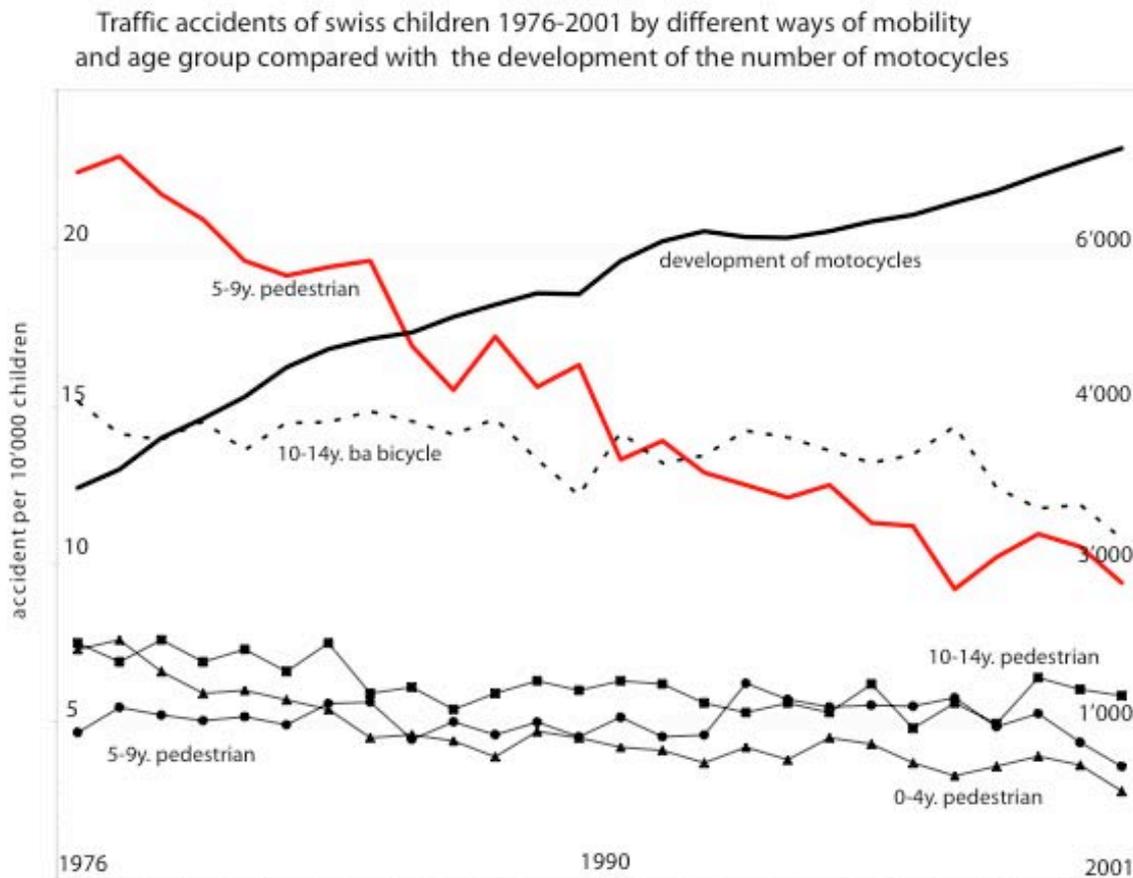
### **VISION ZERO – no children outdoors – no traffic accidents**

Without being ironic this conclusion that less children outdoors are the reason of less traffic accidents is not the official reading, you all know that, naturally.

On the contrary: the decline of child casualties in traffic had been celebrated as a great success by officials and traffic organisations.

They are convinced that this is a result of all measures of traffic safety, technical improvements of vehicles, a better way of street constructions as well as the efforts in traffic education.

A thorough analysis of statistics of child casualties of the last decades shows us that this is not the truth. The descending number of accidents is mostly related to a clear decreasing number of casualties of the five to nine year old children on their way as pedestrians. In all the other age groups and ways of transport the number of casualties is more or less stable in the last decades. The casualty decrease in this group is very low.



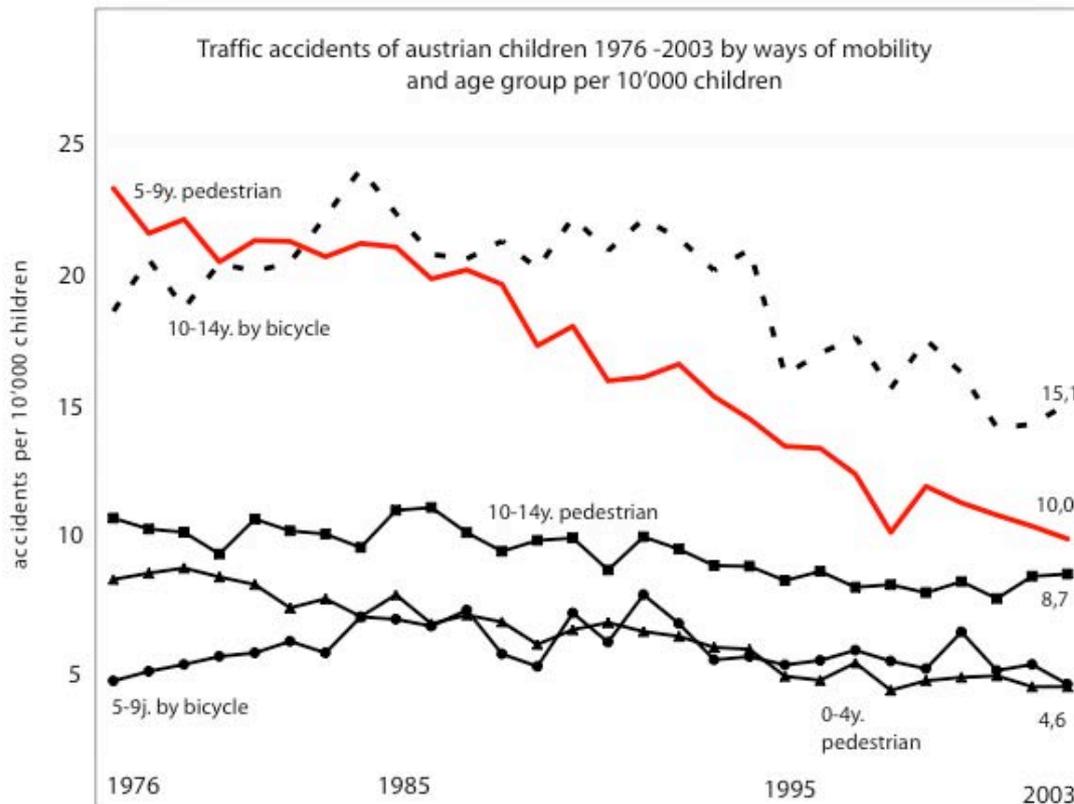
(Table 1 Traffic accidents of Swiss children by age groups and way of mobility, compared with the development of the number of motor vehicle.)

The official reading does not agree to these results. All measures to prevent child casualties taken until now has to be considered as not effective.

The only significant explanation of the descending number of child casualties is that children are driven away of streets.

And: More and more parents put their children into the car, bringing them to their destination, pick them up again to get them home. Research of Mayer Hillman, John Adamson and John Whitelegg in 1992 shows us that. (1)

Switzerland is not the only country where casualties with children are decreasing. The *Institute of Safe Life* in Vienna recently gave me statistics about child accidents in traffic in Austria. They show us a similar development to Switzerland.



(Table 2: Traffic accidents of Austrian children 1976 – 2003 by age groups and by the way of transport.)

It is quiet clear that the one-sided and wrong official interpretations of statistics of child casualties are used to comfort people and to prove that ‘we are on our best way to realise zero accidents’.

Vision Zero is a very worthy and attractive vision if it means no traffic accident AND free mobility of children.

Children themselves experience to be driven out of the street in their daily life. In their paintings they show to us very clearly how they get trough this.



### A Healthy Development of Children as Standard of a new Traffic Policy

Prevention of traffic accidents is an duty of honour. But this has to be carried out on the right spot. If preventing measures are resulting in closing in our children and take away their living areas outdoors, areas they need to learn and experience life, those measures are bad and wrong.

For example:

- Zebra crossings on main roads but also on smaller roads are deleted with the argument that they create a false feeling of safety. But no other help to come across is given.
- Traffic lights that gives children a quite safe possibility to come across the street are more and more changing into roundabouts to let traffic flow more freely.

The consequence of both by example given measures is that children can not come across some streets, more often will be accompanied by their parents or adults and driven by car to their destinations.

Swiss traffic policy has a high safety standard – as shown by the standards of the *United Swiss Traffic Specialists (VSS)*. It is this standard, which obstruct a healthy development of the children.

I suppose this position needs an extra explanation and a historical view back. (2)

The safety of children in traffic is linked strongly to the idea that children could adapt to our modern traffic oriented world. In the past but also the day of today people believe that it is possible and absolutely necessary to bring up children with a safe behaviour in traffic.

These believe has been broken up in the 60th by the work of the Swedish Stina Sandels. She proved that traffic education until the age of 10 has no effects because of biological facts like a limited vision and a limited sense of hearing.

Shortly after that research all reputable traffic institutes in the German Republic started a project '*child and traffic*'. They wanted to prove the opposite of Stina Sandels work: consequent traffic behaviour starting up at the age of two or three years will be successful.

In Switzerland all these things has never been picked up. There was a strong belief in traditional traffic education, starting at the age of five, when children starting to join kindergarten.

In 1982 during the campaign 'Children known are children protected' I published the thesis that traffic is of a strong and negative influence in a child's life. (2) I supposed that traffic education by conditioning behaviour restricts freedom of moving and freedom of experience by children. Traffic education has to be used carefully and directly related to the interest of the children.

Between 1992 and 1995 I successfully proved the thesis that the development of children is been influenced by traffic. Supported by the Swiss National Fund I did research to prove that scientifically. (3, 4)

The result was alarming: children growing up in unsafe living areas with no possibility to leave the house by their own and play outdoors with other children unaccompanied by adults are significantly retarded in development by the age of five. They are less developed physically and in social skills and less independent than 5-year-old children living in safe areas.

These results got quite a lot of attention in Switzerland as well as abroad. Even *The Times* talks about Swiss children growing up in 'batteries'. For chickens that has been forbidden years ago. But traffic policy for children has not changed. On main and lower roads traffic dominates life. An attempt to realise a speed limit of 30 km/h in all villages and cities in Switzerland by referendum has been rejected by the people and the politicians.

A complementing study of mine in 1996 (5) shows us that one third or one fourth of the children in towns and villages don't leave the house and garden unaccompanied by adults because of the dangerous traffic in front of the door. These children must be described as highly threatened in their development.

In the countryside the situation is more often worse than in towns. This is caused by the fact that there is often one main road through the village, dominating the situation.

And side-roads are often constructed in a way which causes hard driving. In villages with low traffic people often drive with more speed than in bigger agglomerations. In the countryside traffic accidents are statistically more heavy. The potential to exclude children thus is stronger.

Recently even conservative institutes like the German Traffic Department (6) have to admit that traffic has a negative influence in child development. Unfortunately they give parents, kindergartens and school the advice to compensate the negative effects of unrestrained mobility by special programs. To clear off the traffic – thus the German Traffic Department – is not thinkable or acceptable.

### **Positive Starts and Developments in Switzerland**

The claim that it is impossible to clear off traffic in favour of children has to be characterised as the 'stupid believe in development'. Possible improvements are not a question of ability or not to do so but of political will and political power.

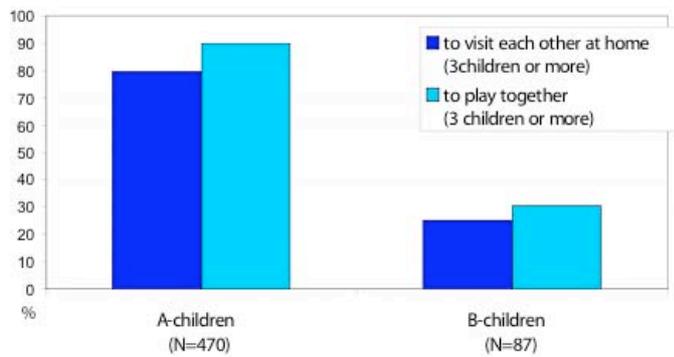
If we are conscious of the fact that such corrections are not only necessary because of traffic safety for children but also necessary because of a healthy growing up and development of the young generation it is not acceptable to surrender to political balance of power and negative social processes.

As we could see those days on this conference there is a changing of thought coming up. A lot of improvements are started last years.

Also in Switzerland there are improvements going on. I want to show you some of these but with the following restrictions. Research had shown that younger children's life is influenced by traffic, especially in the areas

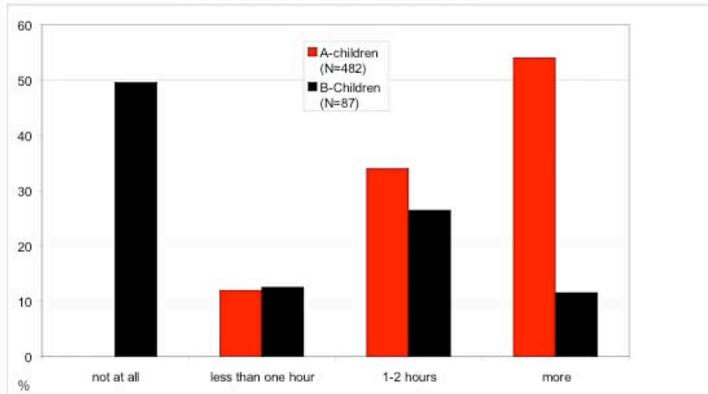
close to the house. The first independent steps of children into our society and world are done only under optimal circumstances in the direct neighbourhood of the house. In non-safe circumstances they will be obstructed, mostly by traffic. If there is no appropriate living area, the time young children daily spend on moving and playing will be more than halved

A comparison of children from safe (A) and unsafe (B) living areas by the number of friends to play with outdoors and by the number of friends to visit at home.

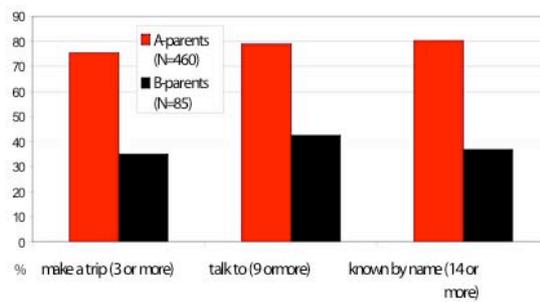


Which tells us that there is a relation between unsafe living areas and the recent discussions about the lack of exercise and bad health by children. An appropriate living area is of direct consequence of physical development of children and the ground for motivation to join sports and intensive exercise later in life. Similar to the former is the ability of social contacts between adults and between children. An unsafe living area causes isolation for both, children (table 4) and parents (table 5). Mutual help between neighbours for instance by spontaneous childcare is an illusion in such an unsafe, isolated situation (table 6).

Staying outdoors compaignied and uncompainied of 5 year old children in Zurich in a safe (A) and a unsafe (B) living areas

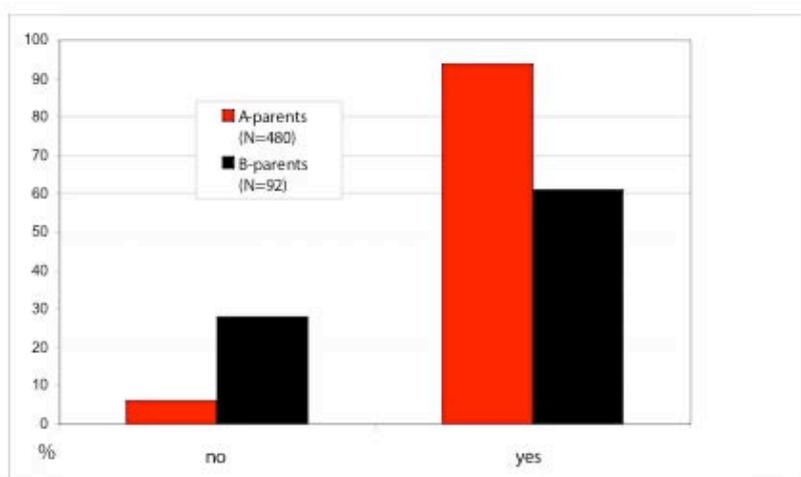


Zurich: Number of adults who's name one knows, with one talks, with whome one makes a trip in relation to safe (A) or unsafe (B) living areas



“A city friendly to children is a city friendly to all”

The possibility of spontaneous childhood care by neighbours  
in safe (A) and unsafe (B) living areas



These results show that it is authorised when I focus on the neighbourhood, there where the people live in the following pages.

I also want to exclude the discussion which is going on about ‘Wohnsiedlungen’, rather carfree areas with centralised car parking, often, but not always with high rise buildings.

This discussion especially looks to solutions of design problems and the problem of young children to reach the safe playing-space outdoors. Here the problems are obstructions in the stair well, by the entrance door or otherwise. I only want to remember that research has shown that ‘Wohnsiedlungen’ are almost the best form of living for children and their parents.

**Living streets (woonerf) and meeting zones.**

The solutions to get to a safe environment appropriate to play, which young children can reach unaccompanied by adults is known for years in Switzerland. These solutions are called ‘woonerf’, home zones’ and more like that.

Public playgrounds, I am convinced, are not the solution. Children often cannot reach them without (adult) company. For instance in Zurich town 65% of the five-year-old children live within 10 minutes walking distance of a public playground. Most of them even have two or more playgrounds within this radius. In fact only 15% of those kids effective have ever visited a playground on their own. The way to get there often is too dangerous – even if it is short.

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The woonerf– in Switzerland as elsewhere – have a longer history. The first woonerf was realised in Basel in 1978. From the beginning woonerf appeared to be expensive projects and there were several attempts to create a cheap ‘woonerf’.

In the 80s a lot of woonerf are built up in towns and in the countryside. A real break-through however never took place unless research showed positive results. Occupants also are in majority positive about woonerf, minus some irritations (as about the noise of playing children).

The last ten years realisation of woonerf has decreased. More and more local authorities refuse to pay the high costs of reconstruction to create woonerf.

Stimulated by the results of our study for the *Swiss National Science Foundation* in the nineties inhabitants of urban streets in Bern began to squat the streets some times. They declared on the ground of Traffic Law that in streets with low traffic it is allowed to play and to sport. On particular times they put tables and playing tools on the streets, to celebrate and realise therefore the possibility for children to play on the street again. The initiators called this ‘*meeting streets*’.

Local authorities had to confirm this new model of *meeting street* in a new Local Act in 2002. *Meeting zones* now could be realised both in living areas and in shopping areas with the same rules. But here we only are interested in streets belonging to living areas. These meeting-zones are the lighter version of residential areas.

Because there is no need for physical reconstruction such as to remove the pavement to create a one-level street, it is quite simple to realise a meeting-area in a ‘normal’ living street. Just put some pillars at the beginning of the street, make the entrance a bit smaller, put a sign 20 km/h and a sign to declare and you are finished.

Costs are very low. Therefore in the last years lots of meeting zones are realised mostly in towns.

Now the new concept begins with downgrading streets into 30–zones except for major roads. Into this 30-zone meeting areas are realised. This concept gives children the opportunity to play outdoors on street again. The 30-zone make it possible for children to reach the meeting zones even if they live a little bit further on.

#### ‘Child-Diseases’ of meeting zones

While writing the new Local Act for meeting zones even the local authorities had doubts about the effects. Are meeting zones sufficient to get more playing space on the street? Although the local act does not forbid to take more measures than prescribed, it neither makes it compulsory to do so. The legislator states that within a legally required period of one year there had to be evaluated if the taken measures are sufficient enough or not. Otherwise one needs to take more measures. The question however is what precisely had to be evaluated: just the speed of cars and the problem of creating new dangerous situations or – what it is all about – if children really play more outside then before having a meeting zone?

These days my colleague Daniel Sauter and I are working on a research project in which we compare different streets and their different integrative effects. For this we use the old research methods of Appleyard and Lintell from 1972. (7) By means of questioning, observation and interviewing experts and inhabitants we tried to find out if traffic behaviour and street equipment have effected human interaction on street.

The questioning and observations have been finished, but the data haven’t yet been handled. During the preparation period however we have visited a lot of new meeting zones and have seen a lot of disadvantages:

- In the majority of visited meeting zones local authorities have omitted to take more measures than absolutely necessary, just pillars and speed limiting by signs must do.
- The meeting zones were not reconstructed. Thus, parking places along the street are still dominating the space. Inhabitants could park their cars but there is barely space to meet and play.

- In contrary to the old 'woonerf' with public space especially shaped for children play, we have not observed any spontaneous playing activities of children in the new meeting zones. Those activities are organised, accompanied and guarded by the adults.

### Conclusions:

Caused by the great effort of inhabitants and parents to realise meeting zones – which normally will not be initialised by the authorities themselves but only by an active neighbourhood – we can establish human interaction, integrating processes and playing actions in the new meetings zones. If and how long however these efforts will proceed is questionable. To create human interaction more moving en meeting possibilities and extra measures are necessary. In particular streets have to be reconstructed by reducing parking space and create space appropriated for unaccompanied spontaneous playing actions of children.

This form of meeting zones is, like the old 'woonerf', a good form, I will emphasise here when it is realised in the correct way. There is no doubt about its interaction effects.

### Two illustrations of situations observed by us:

*Series of photos 1:* Three children are playing in an old living street – two of them are foreigners, two of them with a bike. Because there are two bikes and three children the youngest, the native one lends its bike giving a comprehensive explanation first and began to control traffic without effort.



*Series of photos 2:* In a new meeting zone a playing afternoon has been organised. Families living in other streets have been invited. A native mother with a coloured child walks along with a friend. The child wants to get to the drawing corner. It likes to draw also. The mother reacts with sceptical distance. Even later we see how others had integrated the child in the drawing activities. The mother stands aside and observes it.



### **Additional thoughts and concepts** **Space as new paradigm in child raising**

It may be quite surprising – for I am an educationalist and not a traffic engineer – that I am so clear in declaring traffic being one of the essential influences in the development of a child. I am convinced even my male and female colleagues don't support this idea and I am quite alone with this. The research results up to now support my vision.

In the past we have overestimated the 'power of upbringing' and demanded too much of parents. Bringing up children not only needs competent parents but also needs the right space. And space – as I believe – has to become the new paradigm of child raising. For younger children space means space outdoors, a suitable neighbourhood – so now we are back on traffic.

What we need is new space concepts to guarantee a healthy upbringing of children and a possibility to interact with others. It is quite wrong to press parents to accompany their children year after year, join them everywhere, take their hands and after that to expect that these children have grown up to be independent personalities. This is impossible! It is also wrong to blame institutes of child raising and school for the deficit. We need to reconstruct street space.

Motorised traffic is only one part of this new space concept, but an essential one. The concept has to rise above traffic. Such a concept might be known to you – it's almost 30 years old. In 1977 Christopher Alexander, Sara Ishikawa and Murray Silverstein have outlined it in their book 'A pattern language - Towns – Buildings – Constructions'.

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Already then the authors demanded that units in neighbourhoods, playground and green areas had to be connected to each other by safe routes. Those neighbourhoods also need to have a common room for child care into which a professional lives.

This concept, brightly described in the book, was meant for neighbourhoods newly constructed. The world today is almost completely built up. So we have to think about which measures of traffic constructions will have essential effects. I am thinking of the following – with a side view of the political proposition:

1. In neighbourhoods all streets are part of a 30-zone (This measure is developing in many villages and towns).
2. Inside those 30-zones there have to be home zones as much as possible, meeting zones with less traffic - driving slowly or no traffic at all. A web of footpaths must connect those places to each other.
3. The organisations of childcare, child raising and help for parents – today mainly big ones, concentrated in towns – have to be split up into little units placed directly within the neighbourhoods and settled there.

In terms of street reconstruction it is possible to realise this concept and – except of meeting zones – it is also proved that it is working. What's missing is the network of connected home-zones.

In terms of institutes of childcare and child raising a rethinking is necessary, not only concerning the organisation but also the training of the employees. Professional educationalists and advisors have to be made conscious of questions of build up space and qualified in this matter. They must be able to intervene in public space (for instance finish a quarrel, discuss traffic incidents and problems with local authorities and more of this). In exchange these child institutions must have more moving-space, space they often don't have nowadays and have less chance to drift apart from parents, their actual customers. A direct integration of social workers and educationalists into neighbourhoods with less traffic and lots of home zones will contribute to strengthen the social network and human interaction in this neighbourhood.

Of course, such a concept will not be realised within a short space of time. Each step, however, is a step in the right way. Some try outs are almost ready, think of those in Munich initiated by Herbert Oesterreicher, Ute Gelhaar and Veronika Kettner ([www.kinderfreiland.de](http://www.kinderfreiland.de)) (8).

### **Lack of children and traffic**

In Switzerland the old concept of 'woonerf' had been attacked by the argument, that in a couple of years there won't be living any families with children in those streets. So all the money spend on reconstructing the streets has been thrown away.

The first part of this criticism is a real one: The children grow up and leave, the streets get empty. But the ones who live in neighbourhoods with less and slower traffic stay there for a longer time than elsewhere. This shows us that also elderly people appreciate home zones, 'woonerf, meeting zones. Actually, why not?! Isn't it important in view of the proportional increase of the senior population that more houses are offered to the elderly people in home zones and meeting zones?

Neighbourly assistance in those neighbourhoods is demonstrable better/ greater than elsewhere. This assistance by neighbours often means living more years in their own home and postpone a transfer to an old peoples home. Also public social help will be used less.

Though, the solution is not making less home zones but in contrary make more neighbourhoods with safe traffic structure for people of all ages.

In another sense the decreasing number of children will become a bigger problem.

To motivate children to play outdoors, to move and to run other children are needed in the neighbourhood. In Switzerland this problem is more acute than elsewhere because children here join the kindergarten at the age of five. Until this age they stay at home.

Barely five percent of all children are joining a day-care-centre. For all countries it is evident to give children the possibility to meet each other in the neighbourhood. In bigger quarters (residential areas) with a lot of green space this will not be a problem. Living in a one-family-house on the countryside or in urban quarters with blocks of houses only meeting zones and home zones create an acceptable solution. Although, if here are only two or three children living in this blocks this barely helps to find each other and to play.

Planning quarters today often means to create a neighbourhood with mixed inhabitants, adults with children, adults without children, young and elderly people, natives and foreigners all together in an 'optimal balance'. In consideration with children we need to rethink this housing policy. If there are fewer children there is nothing to mix up. What we need is just getting them together. Residential areas with optimal circumstances for younger children have to be allocated to young families.

Of course, it is not possible to settle a family compulsory but families need to be advised better. Families who are looking for a new house are advised about their house concerning the number of rooms and number of squares, kindergarten nearby or not and school. The quality in terms of possibilities to play outdoors unaccompanied is a matter in these advices.

Thinking of the great impact of a safe living area for up growing children we need to change this together. A good advise about a healthy residential area can help to prevent children of growing up like chickens in 'batteries' and to pine away physically and emotionally.

**I like to sum up my contribution:**

To offer children the possibility of growing up independently, healthy and safe three strategies have to follow together:

- reconstruction of streets, creating 'woonerf', home zones, meeting zones and residential areas with a wide network of safe paths which connect all zones to each other
- supporting this process with public discussions and advising parents about the importance of outdoor space and play mates for their children in the neighbourhood
- Setting up kindergartens and common rooms and space with professional educationalist nearby and in the middle of the quarters to strengthen social cohesion and human interaction.

Finally people needs to feel 'at home' where they live. Our research had shown, that young families which are living in residential areas where children can get out unaccompanied (in towns as well as in the countryside) in the weekend don't travel 160 km but 80 km in average by car. They have found their 'roots' and don't have to run away looking for a better place to be.

I am convinced, that the globalisation process which is taking place can only succeed when people have their roots where they actually live.

I thank you for your attention.

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